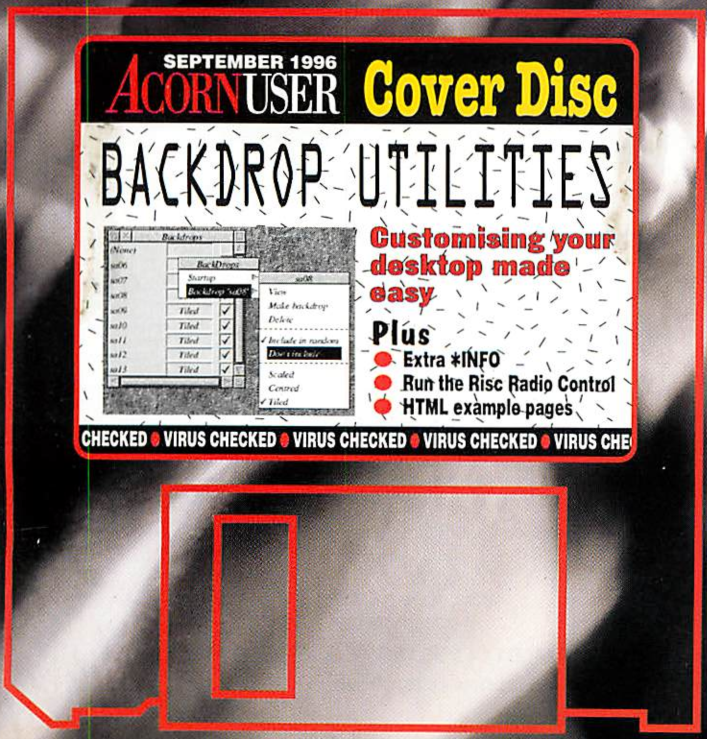
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CONTENTS

Editor's letter

In another lifetime I wrote an editorial which described a scenario where Acorn was successful — success being defined as selling a lot of machines to the point where large software manufacturers decided it was viable to produce software for the machine.

I concluded, at that time, that it would be very damaging to existing Acorn software producers because they would not be able to handle the potential increased business and could not compete with the marketing budget of the big boys.

However the NetStation — being based on the low-cost promotional base of the Web — has the potential to nullify that argument *if* Acorn's third party software manufacturers have the vision to realise it.

Oracle, with Acorn's help, are about to change the face of home computing. We have pole position on the starting grid but if we blow this one we probably won't have another chance.

Let's not mess it up.

Steve Turnbull

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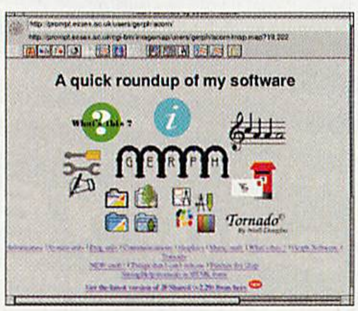
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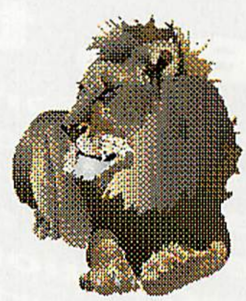




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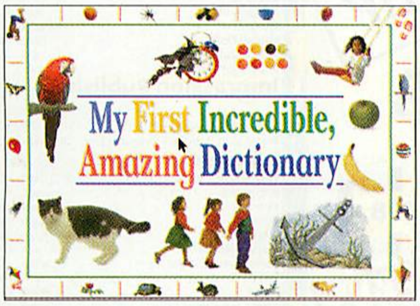
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September 1996

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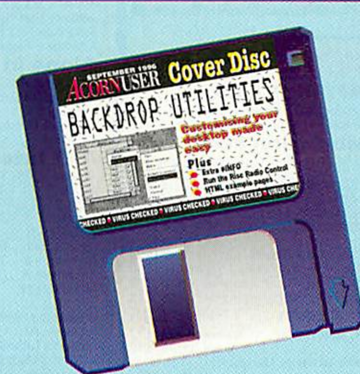
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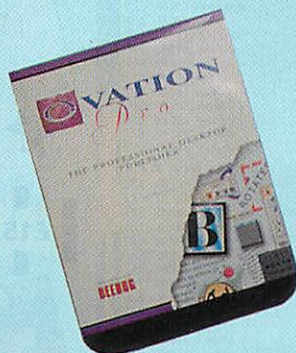
Win tickets to go on a Granada Studios tour - see page 71



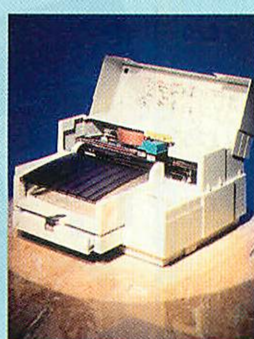
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Risc TV

Risc TV is a new breed of multimedia digitiser. No processing power or bus bandwidth is required, because it uses special hardware to update the screen directly. So now you can watch full-size, full-motion and true-colour TV (or any other video source) in the desktop. An audio processor and TV tuner are fitted as standard, which are digitally controlled by the application software.



Real-Time 24 bit Desktop Video System £298.45!*

*Price of the complete package including expansion card, software, postage and VAT.

Because it does not rely on processing power or true colour modes, Risc TV works just as well on A5000 machines. And you will always see millions of colours in the video window irrespective of screen mode! Naturally you can use Risc TV to grab high quality still images for DTP etc.

Audio can be selected from either the TV tuner, or from an internal audio source (e.g CD-ROM drive). This can be mixed into the computer's internal sound system, or output to a pair of external speakers or headphones.

Risc TV has been designed to be expandable with special feature connectors. A low-cost Teletext option will be the first available add-on.

- ❐ **24 bit framestore (16.7 million colours) updated at 50Hz.**
- ❐ **On-screen display sizes of over 1024 x 768.**
- ❐ **No DMA slot required.**
- ❐ **Real-time control of scaling, filtering, brightness, contrast, and saturation.**
- ❐ **On-board TV Tuner covers Cable and off-air channels.**
- ❐ **Auxiliary inputs for composite video and S-VHS sources.**
- ❐ **Audio support including control of volume, balance, bass and treble.**

For the Complete Picture...

Irlam Instruments Ltd, Brunel Institute for Bioengineering, Brunel University, Uxbridge, Middlesex, UB8 3PH. Tel/Fax 01895 811401. Email: sales@irlam.co.uk

Please note: **Risc TV** works on A5000 & RISC PC machines (requires one free expansion slot). You must have RISC OS 3.1 or later, a hard disc and 2Mb RAM minimum. All hardware products come with full 1 years guarantee. E & OE.

Access

VISA

News

RISC OS gets £1 million boost

ACTION at Acorn these days is frenetic. It wasn't long ago we reported that Xemplar Education was content to sell ARM810-equipped Risc PCs in preference to the much more powerful, but potentially more problematical StrongARM-equipped Risc PC.

Plus questions about the future development of RISC OS were answered without much inspiration.

In a matter of weeks, these two major points have been turned into major policy decisions: Xemplar has ditched the ARM810 in favour of StrongARM and RISC OS is to get a £1 million mid-life kick.

The two decisions are intertwined. The future of ARM-based Xemplar computers is now recognised as being down the StrongARM path.

The stunning performance of early StrongARMs was an inescapable argument in its favour. Xemplar initially favoured the 810 because it would have delivered a smoother evolution of the RISC OS architecture, avoiding the tricky problems of re-engineering both applications and the operating system for StrongARM's revised architecture.

However, Xemplar has seen the light. RISC OS badly needed a good going over and StrongARM was the perfect excuse to do that. While ART, who are internally contracted by Xemplar to do the development work on both StrongARM hardware and the operating system, adapt RISC OS to the StrongARM environment, under-the-skin developments will be carried out at the same time.

For some, the good news falters here. Although ART promise better multi-tasking, for example, there is no giant leap à la Windows 95 from co-operative multi-tasking to the pre-emptive multi-threaded variety.

However, RISC OS has always co-operatively multi-tasked very well, so if substantial improvements are on the way, we shouldn't complain too much. RISC OS is set to work better internally, but don't expect too much to change on the outside.

ART will also have part of the £1 million budget to help independent software developers to upgrade their applications to a) work with StrongARM RISC OS and b) make the most of it. Money will also be spent on improving the inter-operability of RISC OS and Mac OS. Some tricky licensing issues are at stake but the adoption of Apple technologies like QuickTime and OpenDoc are definitely in both Xemplar and ART's sights.

Under the Skynet development banner, ART will develop, as a by-product of the potential of StrongARM power, a multiple-stream version of Replay able to play several movies at the same time. Replay 3 will also aim to be able to recognise alien multimedia file formats and translate them transparently. Time coding will be added to Replay and player for Macromedia presentations is being developed — another Oracle Network Computer spin-off. Apple networking and filing compatibility are being worked on for Xemplar too, which will culminate in a new version of OmniClient.

As we have previously revealed in these pages, the A7000 is being progressively enhanced and will soon get a faster version of the ARM7500 integrated processor chip which will run applications faster and enable bigger and more colourful screen modes to be used. EDO (extended data out) DRAM will also play a part in future A7000 models, a development which parallels the work ART is doing on the Oracle Network Computer.

There is also talk of replacing the ARM710 core inside the 7500 with a StrongARM core. Most of the developments outlined here aren't expected until 1997 and some may not appear for 18 months. However, the commitment within Acorn to not just preserve RISC OS, but enable it to flourish, is most reassuring.



Avery won't jam your printer

LABEL companies like Avery Dennison produce a wide and varied selection of labels supplied on A4 and A5 sheets which can be printed using special software templates. The biggest problem of producing labels using a page printer is that unless you need many labels in one go, a lot can be wasted. Depending on your printer, the blank label sheet might only be safely passed through once.

Some printers, especially compact lasers, have tightly convoluted paper paths through which a page is curled several times before emerging at the other end. A sheet of sticky-backed labels can only endure such torture once. Pass the sheet through a second time and you run the risk of a jam and with sticky labels serious damage could result.

Avery now reckons it has solved the above problem and has produced a family of labels under the Duo product name, which are guaranteed to feed through your printer twice without peeling off and jamming.

Duo labels are also supplied in smaller A5 sheets to reduce wastage. They are produced separately for either ink-jet printer, which benefit from a specially coated surface, and laser.

Label sizes and shapes available in the Duo range include standard rectangular sizes as well as labels for floppy discs, 35mm slide mounts and video tapes. Packs of 20 have a recommended price of £3.49, which is slightly more expensive per label than the original A4 single-pass choice. Avery says all good stationers and computer supplies outlets should soon be able to supply Duo labels.

Good dogs go to heaven

The Datastore's David Coronel has contacted AU with sad news. Back in the mid '80s, Datastore's *Acorn User* ads featured a dog, apparently playing computer games on a BBC Micro, under the title 'Can I play *Elite* now please?' The July 1986 issue of *AU* is one good example.

This was Tristan, who unfortunately passed away on 5 June, aged 14 and a half. He was a happy fellow, right to the end, although difficulty climbing onto a chair meant that he found playing computer games a bit of a challenge in recent years! He will be sorely missed.

Ultraclene your computer

Acorn computers probably get more than their fair share of abuse as they're mostly found in classrooms at the mercy of kids' grubby mitts. Automation Facilities (AF) in Wargrave, Berkshire, Europe's largest manufacturer of office and computer equipment and cleaning products, have produced a pre-saturated cleaning wipe specifically for computers.

AF says its Ultraclene cleaning cloths will shift every day grime from VDU housings, keyboards, monitors, printer casings, etc. with noticeable ease compared to more conventional cleaning solutions. Each Ultraclene pack contains 10 wipes, 10 drying cloths and a disposable glove. AF can be contacted on tel: (0118) 940 3012/4031, fax: (0118) 940 3084

Apologies

The news item about SyQuest in last month's *Acorn User* stated an incorrect Freephone number, it should have read 0800 523559. Apologies for the inconvenience caused.

USR enhances Vi modem



NO sooner have we got used to the re-styled Vi version of the best-selling USR Sportster data and fax modem, than USR bring out a revised version — the Sportster Voice. This is slightly confusing because both the Vi and Voice models are voice-enabled.

According to a USR representative, there isn't a lot of difference between the two modems besides the new 'Voice' badge, however the supplied Microsoft Windows QuickLink software now supports a speaker phone function. Sportster Voice modems can reach the fastest 33.6K bps connection speeds and have a recommended price of £199 inc VAT. Contact USR, tel: (01734) 228200

Xemplar Pentiums not for classroom

AS expected, Xemplar has introduced a family of Pentium PCs, though they will not be marketed as classroom products, but for school administrators. The PCs are equipped with Windows 95 and Ethernet networking as standard and can easily be plugged into a Windows NT machine running Acorn/Xemplar SchoolServer, for example.

Xemplar reminds us that they are now the only major education player who can claim to cater for all three main computer architectures in UK schools.

Photodesk 2 ships

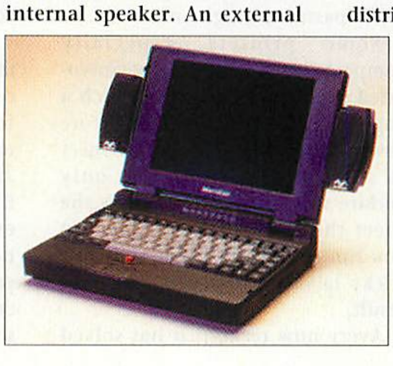
IT has been the subject of AU's graphics columns for months, but now you can buy it — Spacetech *Photodesk 2* is available at last. All existing registered *Photodesk* users will be contacted directly with upgrade information. If you are not registered, there's a good reason for doing so! Until August 31 the upgrade price is simply the difference in price between *Photodesk 2* and the original version – £59.41 + VAT. *Photodesk 2* itself is priced £229.36 + VAT. More good news — ART has tested *Photodesk 2* on a StrongARM and all seems to be well with the combination.

Additionally, Spacetech has announced the immediate availability of *TopModel 1.13*, featuring a full undo capability and VRML 3 dimensional support for Web objects. Sincronia, based in Italy, who developed *TopModel*, has also produced a new graphic engine called Gemini. Designed with StrongARM and Simtec Hydra multi-processor support in mind, Gemini is apparently two to five times faster than the standard *TopModel* engine.

Clares is to use Gemini in new versions of *Composition* and Oregan will use the engine in *CineWorks*. Contact Spacetech on tel: (01305) 822753, fax: (01305) 8600483, e-mail: sales@spacetec.demon.co.uk, Web: http://www.digibase.com/spacetech

Speakers for your A4?

ACORN'S one and only notebook computer, the A4, was blessed with stereo sound right from the beginning but had to make do with a small mono internal speaker. An external stereo speaker jack connection is supplied, but lugging external speakers around with your A4 isn't always a desirable option.



For a price, it looks like distributor PortableAdd-ons in Guilford might have a suitable solution. Their new LapTalk clip-on speakers are designed specifically for notebook computers.

LapTalk speaker mountings can be non-permanently mounted on the flip-up display of your notebook. The speakers are compact and lightweight and have a built-in amplifier.

Power doesn't come from batteries or an external PSU, but from the computer itself via a PS/2 mouse connector. A4s don't have a PS/2 mouse, but perhaps STD's new PS/2 mouse adapter might do the trick (see other story). Unfortunately, LapTalk speakers don't come cheap at a recommended price of £139. Dealers may be able to discount. To contact Portable Add-Ons tel: (01483) 241 333, fax: (01483) 241 330, e-mail: sales@portable.co.uk

OVATION *Pro*

(THE PROFESSIONAL DESKTOP PUBLISHER)

Ovation Pro combines fast responsive word processing with state-of-the-art page layout features to deliver the ultimate desktop publishing system. Packed with a staggering range of professional features—many available on the Acorn platform for the first time—Ovation Pro opens up a whole new world of document design. At last you can flow text inside and outside irregular frames or rotate them to any angle—in both cases the text remaining fully editable. Even with such vast range of features Ovation Pro is still easy to use, thanks to a superb user interface that makes the software easy to learn and instinctive to use.

(SUPERB FACILITIES INCLUDE:)

- Definable Button Bar
- Multi-step Undo and Redo
- Named colour system
- Definable width Pasteboard
- Frames with skew and rounded corners
- Straight and curved line drawing
- Easy-to-use active master pages
- Reads Ovation, RTF, DDF, Artworks
- Irregular frames with Bézier curves
- Drag & Drop for text and objects
- Definable colour charts
- Justification and letter spacing
- Vertical justification
- Autoflow around irregular graphics
- Context sensitive info palette
- Macro handling and script language
- Rotated text frames with editable text
- Drag and drop between documents
- Automatic drop caps
- Multi-column frames
- Frame borders and drop shadows
- Show invisibles
- !Chars and single-shift font change
- Customisable with saveable changes

(FREE UPDATE)

A free update will be sent to all registered users, offering more advanced features such as full-colour and spot colour separations, image processing, auto paragraph numbering and 'local OPI' for handling large graphics bigger than the memory size.

(THE EXTENDABLE DTP SYSTEM)

Ovation Pro has advanced expansion capabilities using extension modules called Applets. These allow new features to be added without the need to upgrade the main application. Simple extensions may also be written using the integrated script language. A range of extension applets and scripts are planned for the future.

(THE OVATION PRO PACKAGE)

Ovation Pro is supplied with a 300-page reference manual, separate tutorial, reference card, Bubble Help, Desktop Thesaurus, 50 outlines fonts (from EFF, Acorn and Beebug) and a sample selection of clipart from DEC_dATA.
Full colour brochure available on request.

(OVATION PRO *costs* £193.88)

Upgrade from Ovation (bought before 27/10/95) £92.83
Upgrade from Ovation or other DTP* £116.33
*includes impression, EasiWriter, PenDown+ and Advance
Other upgrades and site licences available – please phone for details
To upgrade you should return your original disc with payment (discs will be returned).
Prices include VAT but please add £3.50 carriage
Airmail will be charged at cost to overseas customers

BEEBUG

Beebug Ltd.
117 Hatfield Road, St. Albans, Herts. AL1 4JS
Tel: +44 (0) 1727 840303 Fax: +44 (0) 1727 860263 Email: sales@beebug.co.uk

Showroom open Mon-Sat 10-18.00 hrs (All prices now INCLUDE VAT) Carriage not included

CD-ROM Drives

Multi-Session, PhotoCD, CD-DA, White & Green Book compatible. SCSI drives require SCSI card with CDFS >2.20
Carriage: a=£2, b=£6, c=£8

Internal ATAPI CD-ROM Drives

Panasonic 4xCD ATAPI (Tray) £50b
Panasonic 6xCD ATAPI (Tray) £75b
Panasonic 8xCD ATAPI (Tray) £120b
Cable & Fitting Kit £10
Above drives are compatible with RiscPC/A7000 only.

Internal SCSI Drives (Tray)

Sony 2x CD SCSI 275ms £100b
Pioneer 4.4x CD SCSI 150ms £190b
PCW Verdict - 'It's extremely quick, and a bargain.'
Panasonic 6x CD SCSI 140ms £199b

External SCSI CD-ROM Drives

Sony 2x CD SCSI 275ms £155c
Pioneer 4.4x CD SCSI 150ms £260c
Panasonic 6x CD SCSI 140ms £270c
For SCSI interfaces refer to Hard Disc section adjacent.

Hard Discs

Carriage: a=£2, b=£6, c=£8

IDE 3½" Bare Hard Drives

Connor 635Mb 12ms £135b
Connor 850Mb 12ms £Call
Connor 1.27Gb £225b
ForA3000/A3010 hard discs see Hard Card section below.

SCSI 3½" Bare Hard Drives

Quantum 540Mb 12ms £160b
Quantum 1.28Gb 12ms £255b
Quantum 2Gb £Call

Syquest Removable SCSI Drives

EZ135Mb Internal	£120c	105Mb Internal	£90b
EZ135Mb Ext.	£120c	EZ135Mb Cartr.	£20a
270Mb Internal	£125b	105Mb Cartridge	£29a
270Mb External	£215c	270Mb Cartridge	£40a

Hard Disc Interfaces/Accessories

IDE interface	£85b	50-50C SCSI Cble	£10a
Morley Uncached	£150b	25D-50C SCSI Cbl	£10a
Morley Cached	£185b	SCSI2-50C Cable	£24a
Cumana SCSI II	£195b	SCSI2-25D cable	£20a
PowerTec SCSI2	£195b	50IDC 4-way SCSI	£15a
External case/psu	£90c	2nd IDE Drive Kit	£15a

zip/jaz Drives

- zip & jaz Drives work just like hard drives except they are removeable, letting you instantly access files and applications.
- zip drives use 100Mb capacity discs & jaz drives use 540Mb/1Gb discs allowing any number of discs giving unlimited capacity.
- The drives are fast. Data transfer speeds around 1Mb/s for zip drives & >2.3Mb/s for jaz drives - ideal to backup your hard drive.
- Each drive comes with 1 year warranty and a starter disc.
- These drives require a SCSI card that is suitable for removeable devices.

Internal zip drive (5¼") £185b
External zip drive £185b
Single 100Mb zip Cartridge £15a
Pack of 5 zip Cartridges £65b
Internal 1Gb jaz drive (3½") £460b
External 1Gb jaz drive £530b
Single 540Mb jaz cartridge £Call
Single 1Gb jaz cartridge £110a

TopicArt

TopicArtCD1 £30a

This CD-ROM Contains over 2000 ClipArt files, each in Draw, ArtWorks & EPS formats + Replay Movies & demos

Floppy discs £8a each

Single disc clipart containing approx. 50 high quality draw format clip art images on each disc, on a single subject. Comes with mono reference sheet. 20 subjects are available now. Please specify when ordering. Site licence is included.

1	General	11	Tools
2	Transport	12	AnimalsGB
3	Costumes	13	Chemical Hazard Signs
4	Entertainment	14	Fire/Emergency Signs
5	Bugs 2 Slugs	15	Hazard Signs
6	Road Signs	16	Safety Signs
7	Sports Equipment	17	*Xmas1*
8	Sports Figures	18	Xmas2
9	Dinosaurs	19	Xmas3
10	Symbols	20	Xmas4

RiscPC Computers

All Acorn computers include 1yr on-site maintenance. 3yr On-site is available. **Carriage included on computer systems.** For PC Cards see PC Card section below. **Please note that a backplane is not fitted to RiscPC600.**

With 14" Monitor (AKF60)
RPC600 4MHD540 £1325
RPC600 4MHD540+4xCD £1380
RPC700 5MHD540 £1550
RPC700 5MHD540+4xCD £1605
RPC700 10MHD1Gb £1950
RPC700 10MHD1Gb+4xCD £2005
With 17" Monitor (AKF90)
RPC600 4MHD540 £1700
RPC600 4MHD540+4xCD £1755
RPC700 5MHD540 £1925
RPC700 5MHD540+4xCD £1980
RPC700 10MHD1Gb £2300
RPC700 10MHD1Gb+4xCD £2355
Add £0 for iiyama MF-8617E
Add £75 for iiyama MT-9017E

StrongARM

Only £116.33 with RiscPC's
(If purchased before end Aug '96)

20/20 Finance

on Acorn Systems (0%APR)
20% deposit (min) & 20 interest free monthly payments. Min loan £700, Maximum loan £1480. Available subject to status. Ring for details.

A7000 Computers

With 14" Monitor (AKF60)
A7000 4MHD540 £1015
A7000 4MHD540+4xCD £1075

See us at Acorn World, Stand 40
All Prices now include VAT

QuickLynk (v1.04) £32a

With 5m Local Cable £39a
With 10m Local Cable £45a
With 20m Local Cable £52a

QuickLynk allows you to access another unattended RiscOS computer remotely using the serial port via modems or locally using a cable to connect the 2 computers. Each computer can be configured to allow access to any attached filing system device eg ADFS, IDE, SCSI, CDFS, etc. Once connected, files can be transferred to/from the remote computer. Other features include password access, auto dialler with phone book and chat mode to send messages to remote computer/user. Transfer rates up to 1.9 kbytes/s can be achieved with older computers, eg. A410, A3000, rising to 11.4 kbytes/s on the RiscPC range. The transfer rate is limited by the speed of the serial port. QuickLynk cannot at present be used directly from programs/command line. Requires RiscOS 3.10 or greater, ring for details.

QuickTile (v1.03) £29a

QuickTile allows you to create posters from ANY RiscOS application, including Impression. Simply enter the size of poster required & select PRINT from the application! QuickTile does the rest, printing each tile with crop marks and tile references. New features include the facility to print inverted crop marks or no crop marks. QuickTile can only be used with the RiscOS printer Driver or TurboDrivers.

Requires RISCOS 3.10 or later.
Return disc to upgrade for £4.
Upgrade from Tiler for £18.

Mail Order - 0161-474 0778 (All prices now INCLUDE VAT) The lowest prices without compromise

RiscPC PC Cards

A=Upgrade from ACA42 or bought with RiscPC, B=purchased seperately. Carr.: £8

PCCard	A	B
5x86-100	£350	£579
486DX4-100	£233	£350
486DX2-66	£175	£290
486SX33	N/A	£230
StrongARM	£117	£293

The £117 StrongARM price is valid for RiscPC systems purchased before end August '96.

RiscPC Upgrades

Carriage: £3 for Sound Cards
YES 16 bit Mozart Card £70
2nd Slice Case £116c
Window '95 CD (Full) £99a

Memory (Carriage £3)

Call for latest prices, they MAY vary.
RiscPC/A7000 SIMMS

4Mb	£30	8Mb	£60
16Mb	£110	32Mb	£240

RiscPC VRAM

1Mb	£115	2Mb	£185

1-2Mb u/g (exchange) £115
Call for details and prices of memory upgrades for other Acorn computers.

Monitors (Carriage £10)

Older computers will require an adaptor £12
AKF50 14" 0.28dp £315
Ilyama MF-8617E 17" £590
High spec FST Tube with 0.26" dot pitch
Ilyama MT-9017E 17" £675
Very High spec Trinitron tube with 0.25" stripe

Printers (Carriage £8)

Canon BJC-210 £200
Canon BJ-230 £305
Canon BJC-4100 £250
Canon BJC-610 (720dpi) £400
HP LaserJets Printers £Call
Add £47 to above printers for TurboDriver

I³ Networking (Carr. £6)

A30X0 EtherLan 102 £140
Archi EtherLan 514 £140
RPC/A7k EtherLan 602 £120
Add £17 to above prices for Access+.
NetCubes £Call
Easy to install 10baseT Hub pack for up to 6 computers. Ring for more information.

Portable Computers

Carriage: a=£2, b=£6, c=£8
Pocket Book II (256k) £240b
Pocket Book II (1Mb) £280b
Psion 3a (1Mb) £300b
Psion 3a (2Mb) £365b
AutoRoute Express UK/Eire £62a
- 'one of the best packages for the PB/3a

A-Link	£49a	PC Serial Link	£60a
Parallel Link	£28a	Mains Adaptor	£15a
128k RAM SSD	£45a	512k RAM SSD	£125a
256k Flash SSD	£50a	512k Flash SSD	£85a
PB/Ps3 Games	£Calla	PBII/Ps3a Games	£38a

Hardware Upgrades

24i16 Card (1Mb) £450b
FPA for 25MHz ARM3 £67a
iTV TV Tuner & TTX £150b
Joystick I/F (Not RiscPC) £30a
Logitech Mouse (Acorn) £26a
Midi Max Card (CC) £79b
Movie Magic (CC) £275b
Scart Cable (9 or 15 pin) £12ea.a
Serial Upgrade (A3000) £22a
25W Speakers (mains) £35b
80W Speakers (mains) £45b

Modems (Carriage £8)

USR 14.4Vi Sportster £115
USR 33.6Vi Sportster £195
Modems come with a 25-25 PC wired cable & 25-9 adaptor which may hinder the printer port. A 9-25 way cables is available at £10 See below. A3k/Archi req. Archi wired cable.
ANT Internet Suite £115a
ArcFax £32a
Dual Serial Card £104b
9-25 Archi or PC Wired Modem Cable £12ea.
3-way Serial T-Switch (incl. comm. cable) £32

Scanners (Carriage £8)

ScanLight Video 256 £215
Epson Colour Scanners, include !TWAIN & ImageMaster. Bundles include CorelPaint & OCR software suitable for PC Cards.
GTx-5000 Para bundle £425
GTx-5000 SCSI bundle £499
GT-5000 SCSI (bare) £425
GTx-8500 bundle £660
GT-8500 (bare) £569
GTx-9000 bundle £Call
GT-9000 (bare) £Call

Hard Cards/Multi-Pods

See top for other hard discs. Carriage £8
A3010 Hard Disc Multi-Pod
80Mb+User Port £210
130Mb+User Port £275
160Mb+User Port £320
A3000 IDE Hardcards
80Mb + User Port £170
130Mb + User Port £210
160Mb + User Port £255

Printer Consumables

Carriage: £2 for Cartridges, £8 for Toner

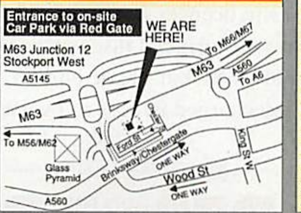
BJ-10 (BC-01)	£18	BJ-200 (BC-02)	£19
BJ-210 (BC-05)	£28	BJ-300 (BJI-642)	£16
BJC-600 Series		**BJC-4000 Series**	
BJI-201HCbk Black	£10	BCI-21Bk Black	£9
BJI-201bk Black	£6	BCI-21C Colour	£17
BJI-201C/M/Y	£8 ea.	BC-20 Fast Black	£28
BJC-800		**HP DeskJets**	
BJI-643 Black	£18	Mono	£23
BJI-643C/M/Y	£23 ea.	Colour	£25

Epson Stylus Colour Black £16/Colour £26
Epson Stylus Colour II Black £20/Colour £26
C3903A Toner (LJ5P) £64
EP-L Toner (LBP-4/HP LJIII) £64
HP 92274A Toner (HP LJ4L) £60
Swift24 Mono/Colour Ribbon £8/£16

Terms & Carriage

Carriage: To benefit personal callers to our showroom carriage is itemised seperately. The carriage indicated is for single items. Please call us for total carriage when ordering more than one item since it is not cumulative.
Terms: All prices include VAT except books. Carriage is not included unless otherwise stated. Carriage charges apply to mainland UK (excluding remote areas, Scottish Highlands, Chann Isles, IOM), elsewhere at cost. Orders MUST be accompanied by a phone number. Prices and spec's subject to change without notification. Goods subject to availability. Goods not offered on trial basis. Restocking fee on non-faulty returns. Official orders welcome from educational institutes, chq with order under £30. E&OE.

Where to Find Us



RiscOS 3.1 Upgrades

Single Rom set £37a
10 Rom sets £290b
Documentation/Discs £22b
Carrier board (A300/A440) £25a

Books (No VAT)

Carriage: a=£2, b=£6, c=£8,
Acorn RISCOS3 PRM's £99.95c
Acorn Volume 5a PRM £29.95b
Acorn BBC Basic VI Guide £19.95b
Acorn RiscPC Tech Ref Manual £49.95c
ArtWorks Made Easy (Dabs) £5.00a
Budget DTP (Dabs) £5.00a
'C' A Dabhand Guide (Dabs) £5.00b
RiscOS 3 First Steps (Dabs) £5.00a

CD-ROM's (Carriage £2)

CD software for RiscOS
ArtWorks on CD (CC) (Carriage £6) £100
Childrens Micropedia CD £98
ClipArt CD 1/2 (CC) £21 each
Dinosaurs (MS) £44
Dune II (Eclipse) £41
Granny's Garden CD £32
Guardians of the Greenwood £51
Hutchinsons Encyclopedia £22
Musical Instruments (MS) £44
PB Bears Birthday Party £37
RiscDisc Vol 1or 2 CD £16 each
Simon the Sorcerer CD £41

Applications

Carriage: a=£2, b=£6, c=£8
Advantage (Longman) £52a
ANT Internet Suite (ANT) £115a
ArcFax (David Pilling) £32a
ArtWorks (CC) £100b
Blinds (Quantum) £25a
Card Shop (Clares) £23a
Chameleon 2 (4Mation) £39a
Compression (CC) £34a
DataPower (IOTA) £105b
Disc Rescue (Look) £33a
Easy C++ (Beebug) £110a
Eureka v3 (Longman) £110a
FireWorkz Pro (Colton) £164a
Font Directory2 (Look) £33a
Font FX (DataStore) £12a
Graphics Loaders (CC) £50a
Hatchback (4Mation) £38a
HTML Edit 2 £44a
ImageFS2 (Alt Publ) £44a
Image Outliner (IOTA) £54a
Impression Style / Publisher £75 / £120b
Keystroke (Quantum) £33a
MacFS / MacFS Lite (CC) £89 / £53a
Ovation / Ovation Pro (Beebug) £93b / £184b
Personal Accounts (Apr) £44a
PhotoDesk (Spacetech) v.1 £185a/v.2 £245b
Prophet (Apricote) £171a
PublishArt2 (SmartDTP) £34a
Resultz (Colton) £88a
Rhapsody (Clares) v3 £87a
S-Base2 Personal / Developer £57 / £115c
ShapeFX (Datastore) £12a
Sibelius 6 / 7 £206b / £920b
Sleuth2 (Beebug) £110a
SparkFS (Pilling) £24a
Speech 2! (Superior) £24a
Studio24 (Pineapple) £141b
Touch Type (IOTA) £45a
TurboDrivers (CC) £50a
Vector (4Mation) £86a

Games (Carriage £2)

Alone in the Dark (Krisalis) £30
Birds of War (4D) 2Mb £27
Break 147/Superpool £27
Burn Out (Oregan) £23
Cannon Fodder (Krisalis) £23
Carnage Inc (4D) £20
Chocks Compendium £27
Chuck Rock (Krisalis) £10
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CC commit to StrongArm

COMPUTER Concepts, as exclusively revealed in AU last month, has confirmed that it has done a deal with Acorn to adapt its main software titles to work with future versions of RISC OS for the StrongARM processor.

Computer Concepts reports it has been working with ART's (Acorn RISC Technology) technical staff and is now aiming to have StrongARM versions of the *Impression* family of desktop publishing and word processing products, *ArtWorks* vector drawing and TurboDriver printer drivers ready in time for this year's Acorn World Show at Olympia.

Charles Moir, founder and managing director of Computer Concepts commented: 'We are excited about the dramatic improvements in performance we expect to obtain from our software running under StrongARM — tests on the *ArtWorks* Renderer suggest a five to six fold increase in performance, and since speed is still often the limiting factor when creating graphics on a computer this will be a real bonus.'

There has been speculation that the commitment to develop StrongARM compliant software was part and parcel of the deal (see other story) which saw Acorn take over responsibility of CC's hardware subsidiary, Wild Vision. There are other unconfirmed rumours that Acorn is looking to license high-performance vector graphic rendering routines from Computer Concepts. If we are able to substantiate any of these rumours, we'll be publishing an update next month. CC say that details on how to obtain StrongARM versions of the above software will be announced shortly.



New joystick interface and mouse

STUART Tyrrell Developments (STD) has announced a new 'Solo' budget Joystick interface, which complements the existing 'N' Interface (Nintendo-compatible) range. Solo is priced £14.95, including P&P. The parallel port interface allows the use of a single standard joystick with any Acorn RISC OS computer. Comprehensive software is included which allows the joystick to emulate keys, the mouse, or to function with any game which supports the standard Acorn joystick SWIs.

STD's second new product this month is PS2Mouse, an adapter which allows any industry standard IBM PS/2-compatible mouse to work with an Acorn computer via its proprietary Acorn mouse port. PS2Mouse also has support for 'tap-clicking' on mousepads such as the ALPS Glidepoint range.

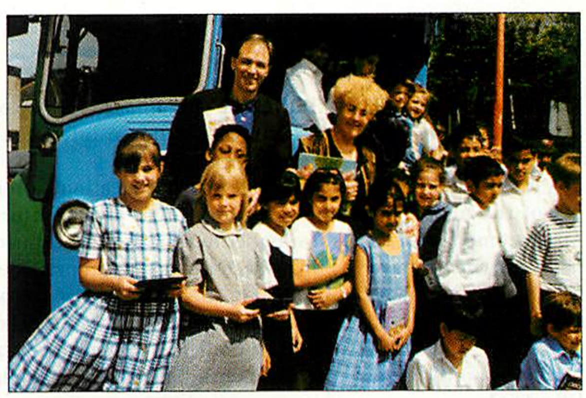
Other configurable options include the ability to swap select and adjust buttons, and three levels of acceleration. PS2Mouse is priced at £24.95 including P&P. Contact Stuart Tyrrell developments at PO Box 183, Oldham, OL2 8FB or e-mail: info@stdevel.demon.co.uk, Web: http://www.busacu.co.uk/stdev

Xemplar joins Docklands Learning Acceleration Project celebrations

XEMPLAR Education has been celebrating the Docklands Learning Acceleration Project's first anniversary by sponsoring several IT-based activities taking place at Seven Mills Primary School, Tower Hamlets. The activities showed how children use Acorn Pocket Books to enhance literacy.

Xemplar is co-sponsoring author Vivian French and poet Steve Turner, to work with children on the London Docklands Development Corporation's (LDDC) Book Bus which visited Seven Mills School as part of the celebrations. Xemplar also supplied the Book Bus with a set of Pocket Books for children to use for creative writing on the day.

Xemplar has supported the Learning Acceleration Project, which is largely funded by the LDDC and managed by the NLA, from the start. No less than 450 Acorn Pocket Books are being used by schoolchildren and their families in Newham, Tower Hamlets and Southwark as part of the initiative which continues until next year. The aim of the project is to improve standards of literacy and basic skills in 600 Year Three children in 15 schools, including one special school.



The latest techniques in multimedia and portable technology are being used to motivate children at school and with their families at home in support of literacy and related IT-based communication skills.

According to Xemplar, several lessons have been learned after the first year of the project:

- Pocket Books have shown teachers new and better ways of integrating IT into the curriculum
- Teachers have gained confidence in their use of IT
- Children are more motivated to participate in literacy activities and spend more time on each task
- They enjoy sharing their work with family members when they take Pocket Books home
- Children find Pocket Books easy to use and have developed their IT capability in line with the National Curriculum
- They have improved the quality and increased the quantity of their work and Pocket Books help with spelling, reading and writing.

To contact Xemplar, tel: (01223) 724200, fax: (01223) 724300.

Risc PC celebrates Terry Pratchett

THE First International Discworld Convention, a celebration of the very popular novels, especially Discworld, of leading comic fantasy author Terry Pratchett, was recently held in Manchester just yards from the devastated Arndale Centre.

At the heart of the organisation was a Risc PC upgraded with an ARM 710 owned by Andy Matthews — who actually works for a well known vendor of Unix operating systems. Andy's Risc PC churned out practically all the convention's literature and graphics, including posters, newsletters, programs and flyers.

The convention, organised as an amateur event by Terry Pratchett fans, was held in Manchester over the weekend of 28-30 June and at least 850 attendees were there, including the great man himself.

Work started on the convention a year earlier and the Risc PC was put to work straight away. The machine was fitted with 14Mb RAM, 2Mb VRAM, plus 480Mb and 210Mb IDE hard-drives. A 1.2Gb hard-drive also added halfway through the project using the new RISC OS Filecore. *Impression Publisher* and *ArtWorks* were used along with an Epson Stylus Color ink-jet printer.

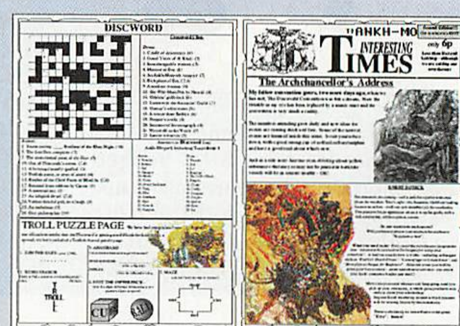
In all, five convention update magazines (double-sided A4 folded in half to make A5 pamphlets) were produced. These started out with eight pages and mushroomed to 30 pages. Colour and mono *Impression* posters were professionally printed for the convention by T-J Reproductions — a well known London-based repro house with Acorn know-how. The programme book distributed to attendees was also created on the Risc PC and professionally printed and bound for the Convention by T-J Reproductions.

The Risc PC was taken to the convention, where it was used to create all directions and signs for inside the hotel — taken over completely for the whole weekend. Its main use was to create a daily 'paper' including scanned photos and captured video. Andy said he was personally amazed at the ability of the Risc PC and he will be taking his trusty machine with him when he and his job are transferred to Santa Cruz, California later this year.

Andy can be contacted at: andy@andrewm.demon.co.uk







Acorn World '96

THE Acorn World '96 exhibition at Olympia 2, 1-3 November , offers something for both parents and children interested in the fun educational use of computers.

A highlight of the show will be 'Xemplar Education' — the product of the Acorn Group recently forming a joint venture with Apple Computer, the largest supplier to education world-wide. The new company promises to bring high-quality, appropriate learning solutions to the UK schools market. The first fruits of the partnership are now available for children in Primary and Secondary education, providing the most comprehensive range of educational hardware, software, training and consultancy services available to UK schools.

Acorn World will be the first chance see the a public demonstration of *Toolbox* — the first classroom teaching package designed specifically to run on either Mac or Acorn computers and covering curriculum studies in English, Maths, Science, Geography, Design and Technology.

Friday 1 November at Acorn World will be dedicated to education, with a full seminar programme of topics related to IT in Primary and Secondary schools, and Special Needs provision. Saturday and Sunday is devoted to families and over 100 exhibitors and features, plus seminars on 'Helping your children at home with a computer' from the Parents Information Network; the latest techniques in desktop publishing, and the Internet for both beginners and advanced users, will ensure an interesting day for all visitors.

A creche is provided for the under fives (who are admitted free), and money can be saved by purchasing advance tickets: Adults £5 (£7 on the door), under 16 £4 (£5 on the door) and families £16 (£20 on the door). A family ticket admits two adults and two under 16s and an advance ticket booking hot-line is now open on 0701 0709 909. To keep up-to-date with news leading up to the event in November, keep an eye on the Acorn World Home page on the Internet: http://www.eps-events.com/acorn-world

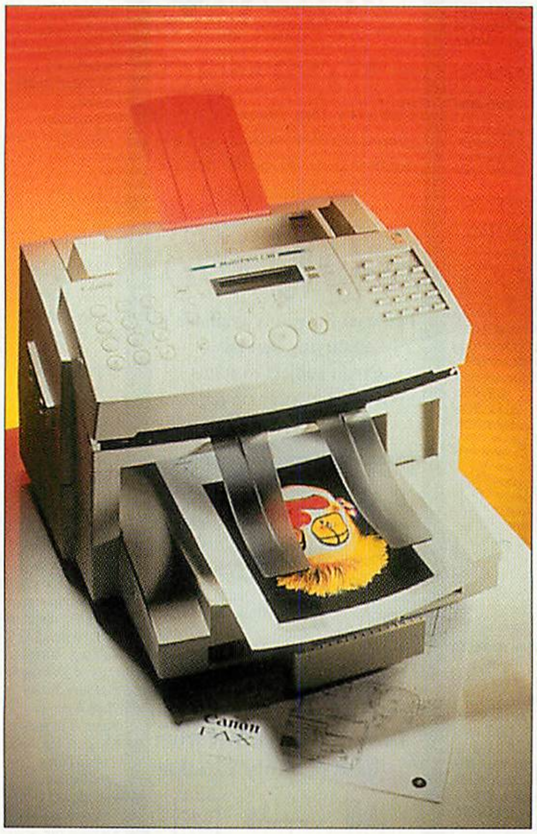
Acorn WORLD

Printing colour via your fax?

MANY printer manufacturers, like Canon, for example, produce fax machines too and the trend has been that their fax machines have borrowed considerable printer know-how. Fax machines now often employ laser and ink-jet mechanisms, for example. The next step was to enable a laser or ink-jet plain paper fax machine to print documents from a personal computer and enable the same computer to access the fax machine's built-in scanner.

Until recently, PC-linked fax machines have been expensive and limited. That all changed back in April, when Canon launched the MP10 monochrome PC printer which could also function as a low resolution scanner, copier and plain paper fax. The, then, reasonable £799 price tag included *MultiPASS* software which managed faxing and printing from applications running under Microsoft Windows. It also enabled received faxes to be stored on the host PC's hard disc, plus documents to be scanned — Acorn software is unavailable at this time.

The MP10 has a two page per minute print speed at 360dpi and a 20-sheet document feeder for the 200dpi monochrome scanner section. At 200dpi, you will only get *fax-resolution* scans and copies, but it's better than nothing and scans take just six seconds per page. A telephone handset and an LCD status display are included. The MP10 will also work as a stand alone fax machine



Now a colour printing version of the MP10 has been announced. At £700, the Canon MPC30 is actually cheaper than the previous price of the older mono MP10. But this is hardly surprising as ink-jet printer prices have fallen substantially this year. Top of the list in new features is colour printing capability as the print mechanism has been borrowed from Canon's highly successful BJC-4100 colour Bubble Jet.

Running costs are competitive with the Stylus 500 (see below) at around 2.1p per page for colour printing with 5 per cent coverage and 2.3p per page for ordinary monochrome text output. That equates to about 670 pages per monochrome cartridge and just over 1,000 pages for the colour cartridge. Heavier colour printing will dramatically lessen the capacity of the colour cartridge, however.

ART's Vision gets a bit Wild

HEADLINE writers rubbed their word processor with glee when this story emerged. Computer Concepts has said goodbye to its Newcastle-based hardware subsidiary, Wild Vision, which has been acquired by Acorn's ART division. The deal involves an exclusive two year contract which encompasses Wild Vision's top designer, Peter Wild, intellectual property rights (IPR) and the rights to Wild Vision products.

The deal sounds a bit convoluted, but as of 1 July, Peter Wild, chief designer and founder of Wild Vision joined ART. Although Peter founded Wild Vision, for the last four years or so, the company and its products has been owned by Computer Concepts. Wild Vision multimedia products, including sound and video boards, the Eagle, for example, were extremely popular in Wild Vision's heyday.

The company also produced other CC hardware products like the Colour Card, for example. Lately, Wild Vision has been mainly working on contract projects for Online Media (MPEG boards) and recently ART, so the take over is progressional. Another former major player in the Acorn hardware peripherals market, Morley Electronics, also based in Newcastle, has purchased Wild Vision's manufacturing facilities.

According to ART's Peter Bondar, initial designs that ART will develop, based on its newly acquired Wild Vision intellectual property, include MPEG 2 set-top boxes and multiple display multimedia kiosks. Bondar commented: 'We're very excited to welcome Wild Vision to Acorn. Their extensive intellectual property rights catalogue will be a great asset to ART. Over the past six years Wild Vision has produced some extremely popular hardware and software products for Acorn, and we're sure this closer working relationship will result in even more innovative designs that will have major implications on the future of RISC-based technology.'

Costs drop even lower

The Epson Stylus 500 may not be as refined as its whisper-quiet Canon counterparts and its boxy styling is not very distinctive. However with its fine print quality, low running costs and 100-sheet paper feeder, Epson should have a true winner on its hands. The recommended price for the Epson Stylus Color 500 is £299, but we have spotted the new printer advertised for as little as £215 + VAT. Computer Concepts is currently working to ensure its Epson TurboDrivers are compatible.

Epson, working hard to topple Hewlett-Packard and Canon from the leadership of the ink-jet stakes, has also introduced an extended Cover Plus warranty scheme offering on-site repair. The scheme has tow tiers, Standard Service and Premium Service. The former guarantees on-site response within eight working hours and four hours for the latter. Epson guarantees to fix your printer, not replace it with a refurbished model. Costs start at £40 for entry-level ink-jet models like the Epson Style Color II for three years of cover. Contact Epson UK on tel: +44 1442 61144



Graphics

Studio 24 Pro released

AFTER a long wait for version 2.12 of Pineapple's *Studio 24 Pro*, it is now shipping. The main difference between the beta versions and this, the release, is stability.

Pineapple has done well to iron out bugs and the program runs well in the most arduous of conditions. Still, there are some areas that need attending to such as Virtual Memory which seems to unnecessarily hinder the pace of machines with excess memory by continual disc cacheing in some areas.

Despite many pro-*Photodesk 2* activists saying there is no longer a place for alternatives, I strongly feel that *Studio 24* is finding a perfect niche for itself in its price range. I also think that it still remains the best package for some types of origination – as Walter Briggs demonstrated with his style of artwork most suited to *Studio 24 Pro*'s qualities.

New brushes for Photodesk

WHEN *Photodesk* first came about, there was a general consensus that the brushing was not as responsive as it could be and that an anti-aliased paintbrush was definitely lacking. Since then all the complaints have gone.

Now, *Photodesk 2*, version 2.02 has really begun to innovate where before it lagged behind demand. Spacetech has added the much needed 'spacing' variable to its brushes and smudge tools as well as 8-bit greyscale bitmaps which can be designed and incorporated with ease into the airbrush and paintbrush sets. The brushes can be plotted ordinarily or made to rotate according to the direction of the brush stroke. Without exaggeration, brush painting is quite incredibly realistic when using a pressure sensitive graphics tablet

With the advent of StrongARM, real time rendering of subtle and artistic media with complex pixel processing and 3D effects will soon come.

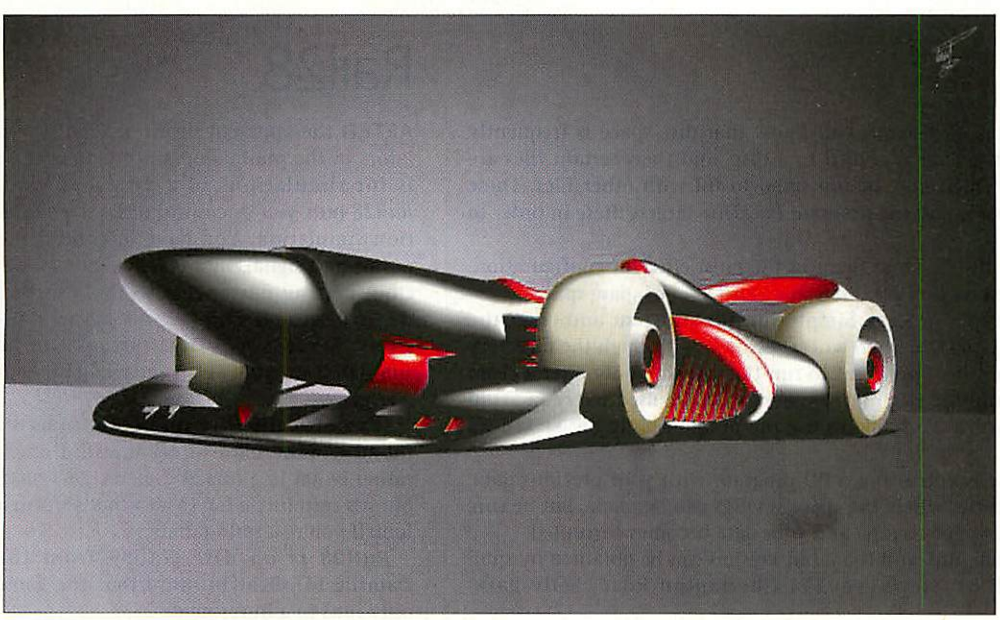
Pic of the Month

PAUL EVANS from Wales sent in no less than 20 high colour sprite files squashed onto one wee floppy, a task worthy of a prize in itself. All were originally *Artworks* files which were converted into bitmaps. (NB. You can send me vector-based files, they generally come out sharper in print).

Paul is studying Technical Illustration at Swansea College and the selection of his portfolio that he kindly sent in is proof indeed of his talent. I am in no doubt that Paul Evans will be one of the big names in the Acorn graphics scene in years to come.

The images ranged from a number of Sci-Fi and Star-Trek graphics to portraits and cartoons. Paul even submitted alternative Tools, Backdrops and RISC OS Sprites 22 icons.

Some of the *Artworks* files took up to eight hours to complete using a Risc PC. A very deservedly won £20 makes its way to Wales and remember that all winners can claim a free slide recoding from the Digital Darkroom.



TopModel's new e-mail address

Top Model's e-mail address is now s64922@galileo.polito.it PC Pool, once the international distributors of the package is no longer serving in that capacity. Any mail can now be sent directly to the programming and marketing team at the new address.

Bargains galore

Last month I commented on the great value of RiscTV. This month, another cracking deal from Sonamara. If professional quality genlocking is what you want then the MultiGen2 Pro with top resolution of 1600x1200 is under £300 including VAT and UK carriage. What's more the standard and Pro cards are Mac compatible as well.

Tel: Sonamara (01626) 873763

Did you know...

The latest version of Unix for the Risc PC is actually a later release than the version shipping with Sun Solaris workstations. This may not seem directly relevant to RISC OS graphics users, but having spoken to a number of enthusiasts and technical wizards, it is not at all far fetched for a RISC OS front-end to be bolted onto Unix.

This may be something in the pipeline. With the possibility of true parallel processing on Hydra boards under Unix, we could be seeing the opportunity for Acorn users to run extremely powerful modelling and rendering software without having to fork out for a *Spark*. *Top Model Pro* could act as an important bridge between RISC OS and Unix in this area, which will be a sharp focus of the graphics page's attention in months to come.

Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by email to augrafix@idg.co.uk.

Public Domain

Joop

AFTER Moving Pixel Productions' *XylonII*, reviewed on these pages a few months back, arcade games written in Basic seem to be all the rage. Gek Productions has repeated, if not surpassed, previous attempts at this kind of game with a host of new releases. *Joop* is the most outstanding of these, and reveals Gek as a replacement for the much missed Tom Cooper on the Acorn games scene.

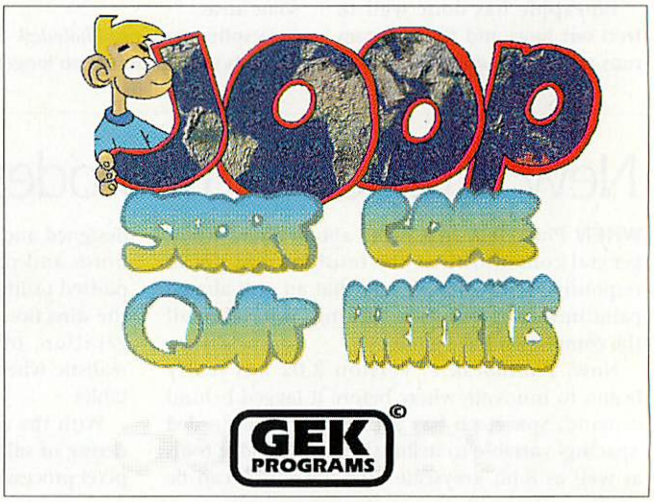
Joop is a traditional platformer, putting you in control of a rather unfortunate character called *Joop*. Judging by the excellently drawn cartoon-style story introduction (provided in a draw file), *Joop* has been sucked into a strange world inside a freshly delivered parcel. By collecting all the objects on each of the 25 levels, *Joop* can kill the strange pig statue thingy and escape from the 'world of Weirdness'. It all sounds rather bizarre, but it's just part of background given to the game. The word wacky could probably be used to describe the game's style quite accurately.

All the graphics are well drawn in a cartoon style and suit the game down to the ground. Little animations add interest to the character, and it's these little touches that make the game. If you stop controlling *Joop*, he falls asleep on his feet. Tell him to climb a ladder and he hangs off rather precariously. Jump on a passing chicken and *Joop* utilises the feathers to make a couple of wings, letting him fly around the current level. The animation of *Joop* getting squashed is also satisfyingly gross (in a cartoon kind of way).

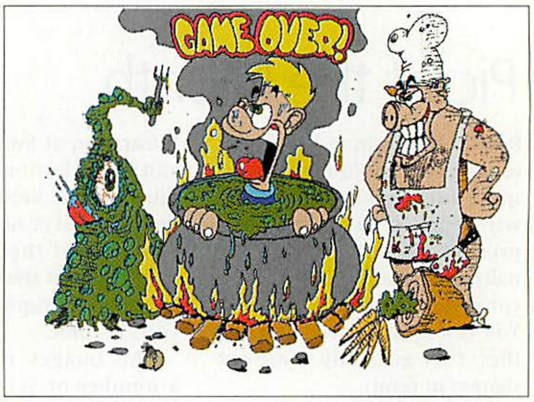
The sound is well supported with some reasonable music and a large number of seriously weird but amusing sound fx. The combination of these excellent production values with a really playable arcade-style platformer makes for a great game. The size, quality and range of setup features could be likened to that of a commercial game, which is really nice to see in a PD release. The only minor drawback is the lack of speed provided by Basic. Having said that, *Joop* ran well on my RPC, but earlier machines struggle a little.

PD games seem to be coming thick and fast at a time when commercial releases are at their thinnest, and *Joop* is certainly an essential acquisition for the serious games player.

Joop is available on disc GA092 (HD disc only), from the Datafile. More games from Gek, next month.







PackDisc

USERS of the freeware application, *Realcount*, will know that disc space is frequently used up by wasted fragments. When data is copied to a disc, and then certain files are deleted, gaps are left on the disc which may be too small to fill with other files. These fragments are effectively wasted space, and the program *PackDisc* targets these in order to save space.

PackDisc re-orders the files on a disc to store them in the most efficient configuration. A fragmented disc which is operated on by *PackDisc* can free up a lot of spare space.

Using the *PackDisc* is a very simple process. Simply run the program and enter the directory you wish to de-fragment. *PackDisc* then works recursively through the directory structure, freeing up space as it goes. It's important to run the software only after a clean re-boot with no other programs running. High level system calls are used to try to avoid any problems with corruption, but it's advisable to use the program only on backed up data.

The only problem with *PackDisc* is entrusting a PD program with your precious data. It's great for frequently used directories where big space savings can be made, but be sure to take precautions in case something goes wrong and your data becomes corrupted.

PackDisc is available on the Arcade BBS and the latest version can be obtained by snail mail by sending a disc and SAE to: Steve Lee, 114 Cherington Road, Selly Park, Birmingham B29 7SR, England.

Rail28

AFTER the apparent death of flight simulators in the public domain, the new craze is for simulations of a different kind. *Rail28* puts you in control of a railway station simulation. You have to control the points and signals of a massive railway station, getting passengers to their correct destination and avoiding disastrous collisions. Several real life stations can be simulated in what is a pretty comprehensive game.

It's not really my cup of tea, indeed I found it quite hard to get into (I'd much rather be sat in a Mig29 than a signal box), but it's certainly a novel idea that's worth a look if you're a train fanatic.

Rail28 is on disc GA089 from the Datafile PD. Bear in mind that the game only runs in a hi-res mode 28.

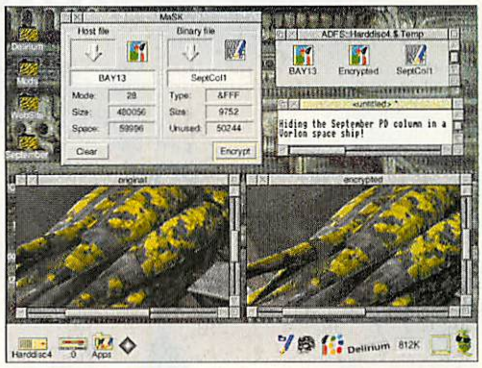
Mask

AS the Internet is rapidly turning into a commercial marketplace, the need for security programs and data encryption is becoming vital. The traditional way of protecting data is to encode the file numerically, with access provided only to the people with the correct key. An alternative and more interesting route is to conceal precious data within more mundane files. Budding Cypherella's interested in trying out this technique by hiding data within ordinary graphics files or sound samples should get hold of Graham King's *Mask*.

Mask takes input in the form of an ordinary sprite or sound sample, and a second file which will be hidden within the other data. The data to be concealed is then inserted and spread out into the first file. With sound samples this produces a hardly noticeable loss in quality and is virtually undetectable. Graphic files are more noticeably affected and a highly detailed or dithered picture is essential if you're not to notice any image quality loss.

Retrieving a concealed file is as simple as dragging the combined file onto *Mask*'s icon, and saving out the concealed data.

It's obviously not a solution to entrust your corporate data secrets with, but it's an interesting idea that's quite fun to try out. After the release of *Mask* it'll certainly be worth checking the files of the next Quantum demo for any hidden secret parts! *Mask* is available from the Arcade BBS.



Software requests

In response to the request for a background sound playing program, Rick Hudson has put forward his *SoundCon* and new *Playit* software. Rick's system fits the bill nicely, and supports playback of a range of samples. Features are being added to support 16-bit sound and Soundblaster playback. *Playit* is already being used by several Acorn developers. For more information, contact Rick by e-mail at: rick@actrix.gen.nz.

We've had a fantastic response to the random backdrop program request, making it an almost impossible task to select the best entries. In the end, I picked Andrew Booker's *!Backdrops* and *!Backset* which uses a fully functional setup program. Many entries used a simple but effective directory or filename solution, but Andrew's program provided a little extra functionality.

Also included on this month's cover disc is the existing *AllChange* Freeware program by Mike Smith. Mike's program goes one step further by changing the backdrop picture at regular time intervals! More software solutions, next month.

Diccotery

Quality compression programs have always been plentiful on the Acorn platform, with the widely used *ArcFS* and *SparkFS* being complimented by an array of PD programs like *Crunch* and *PackDir* which first hit the PD page several years ago. Despite the benefits of certain aspects of these programs, coder Phil Norman was annoyed by the process of having to search for the right decompression program to unpack files he's just downloaded from the Net. *Diccotery* is Phil's alternative which produces self extracting archives.

When you tell *Diccotery* to compress some data it appends some special decompression code to the start of a file. To decompress it, all you have to do is set the file type to absolute and double-click on it. This runs the code which starts up a desktop task and produces a save box. Simply drag the icon to its destination and Bob's your Uncle. Decompression is very fast and compression rates are slightly better than *ArcFS*.

As a solution to Phil's original problem, it's going to take a long time to take off – if at all. Having said that, *Diccotery* does its job very well and is ideal for compressing files that will be stored on the Net. I really hope it is used widely, as it's just another small step to making the acquisition of PD software even easier.

Diccotery can be obtained direct from Phil's Web site at: http://newton.ex.ac.uk/general/ug/norman/apps/dicot or by snail mail to Phil at: 1 Claredale Road, Exmouth, Devon EX8 2EE, England. Please include a disc and SAE to obtain the latest version of the program.

Optic

The new issue of the *Optic* disc magazine, by Jonathan Gutteridge, is now available on the Digital Databank BBS. Alternatively, all three magazines can be obtained on one disc direct from Jonathan, contact: J.Gutteridge, 2 Newton Close, Eaton Rise, Norwich NR4 6RB.

Beanz

Beanz is the latest release from ARM'd and Dangerous and is available exclusively from Risc World PD. As well as operating as a standard public domain library with a snail mail address, Risc World now has its own bulletin board system. Dial (01695) 422825 from 4-10pm weekdays and 9am-10pm weekends. As always, Risc World can be contacted on the Net at: Daniel.Hayes@Argonet.co.uk.

Xperience on the Net

The new Xperience home page can be found on the Web at: www.stud.uni-hannover.de/~bcl/Xperience/index.html.

Recommended PD Libraries

The Datafile, 71 Anson Road, Locking, Weston-Super-Mare BS24 7DQ

Naked PD, 'Fayence', Fulford Road, Stoke-on-Trent, Staffs ST11 9QT

Arch Angel PD, PO Box 41, Exeter EX4 3EN

APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN

Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ

Beebware PD, 83 Forrest Road, Huncote, Leicester LE9 3BH

ARM Club PD Library, Freepost ND6573, London N12 0BR

Risc World PD, 1 Standhouse Lane, Aughton, Lancs, L39 5AR

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. Or preferably, by e-mail to aupdeditor@idg.co.uk.

Comms

The Acorn Webzine scene

It may sound like a new Risc PC shoot-'em-up game, but *rxñ: risc armageddon* is an on-line Web magazine for Acorn computer users. There are growing numbers of e-zines or Webzines available to browsers on the World Wide Web. Most are still free-access, and the variety of subjects covered is a wide as the web itself.

rxñ: risc armageddon is an e-zine produced by Jon Wright and an enthusiastic team of unpaid authors and reviewers, and exists in Web space kindly provided on a WWW site in The Netherlands. At the time of writing, Issue 2 has just been released and one of the features inherent in an e-zine is that new articles can be added at any time, and readers are encouraged to submit articles and programs for review by members of the team.

The name *rxñ: risc armageddon* refers to the reaction between Acorn technology and that of 'the others', and the expectation of Acorn coming out on top. The e-zine is totally produced on Acorn computers using the popular and instinctive packages that we know and love, such as *Impression*, *Zap* and *Paint*.

Issue 2 features articles accessed by a convenient menu bar device on the pages, as well as forward and back buttons at the bottom of the pages. Software described and reviewed in the Desktop section includes an overview and information on the *Tornado* operating system project, the latest details on *X-Files* – the Filing system with long filenames and unlimited files, Toby Bryans' neat *Floating Clock* and other software, together with links enabling readers to download them.



Interesting reading despite the obscure names

Other Regulars sections cover subjects like Communications, with a list of Acorn Bulletin Boards and comms and Internet-related software reviews.

The DDE software development area has articles on coding in BASIC and ARM Assembler, while the Games information section looks at *Destiny*, *Pushy 2* and the *Gameboy* emulator.

Music and Networking news are also covered, and a Links section allows you to browse to other personal, interest group and commercial homepages.

There's a glossary of terms that may be unfamiliar in the articles, and a complete index of all the pages. You can read *rxñ: risc armageddon* e-zine at http://snt.student.utwente.nl/~acc/rxn/ and there's even a thoughtfully provided link to another Acorn Webzine called *Digital Oasis*.

Kai Andersen's *Digital Oasis* e-zine mentioned recently on this page also features news and reviews of Acorn events and software, such as a full report on the recent Wakefield show with excellent video-still illustrations, and background information on the Acorn/Oracle network Computer initiative.

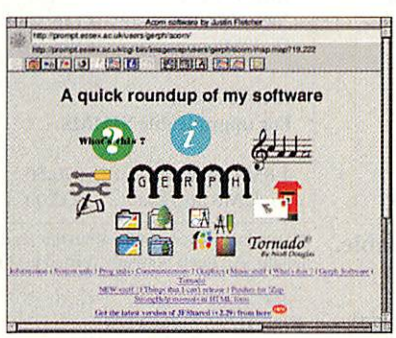
A new edition will probably have been published by the time you read this, so have a look at *Digital Oasis* at http://box.argonet.co.uk/users/aok.

URL of the month – Gerph's Homepage

Justin Fletcher has only just finished his first year of a Computer Science degree, but has already had several of his programs published in this journal. His pages offer a well-designed and entertaining look into the life and times of a university student.

From the section on his literary efforts at school and beyond, through things he hates most to things that he likes, there's an unexpected poetic tone to his writing.

His extensive software catalogue covers System and Programming utilities, Communications programs such as the excellent *ReadMail* mail reader for ARCbbs users and various WWW utilities such as *Imagen*, his latest imagemap editor for Web page designers. All these programs are described in the pages and most can be downloaded from them.



A page in the life of Gerph

One wonders where he got the time for all this independent work while studying – but then isn't that what first-years are for? You can find out more about his friends, loves, musical tastes, poetry and programming by visiting the homepage of Gerph aka Justin Fletcher, at http://prompt.essex.ac.uk/users/gerph/

Zeridajh

One of the 'names' on the Acorn scene, John Kortink, RISC OS software writer extraordinaire, now has a World Wide Web homepage from which you can obtain all of his latest releases. Software on offer includes his *Translator* 7.21 image viewer/processor/converter, *Creator* 1.42 image converter, and *PackDir* 1.35, the file archiving utility. John says that new versions of these old favourites are underway, so keep checking the page for updates. You can e-mail John Kortink at kortink@inter.nl.net.

Zeridajh homepage
www.inter.nl.net/users/J.Kortink

At The 23rd Hour

Just arrived on the BBS scene is The 23rd Hour, run by Sysop Steve Smale from Corfe Mullen in Dorset. The BBS runs on a Risc PC 600, with 210Mb internal hard drive and an external 400Mb SCSI disc, and using *ArmBBS* software with a 14400bps modem by Electronic Frontier.

Steve is developing a unique call detection system that will enable The 23rd Hour to use the shared phone line for all of the 24 hours. Message and file conferences include the usual Acorn interest areas as well as Christian subjects. The 23rd Hour is FidoNet node 2:251/33, RiscNet 7:44/533 and is also Dorset's host for XNET, a new mail and chat network for all computing platforms.

The 23rd Hour
(01202) 692394

X-Net BBS

A new bulletin board located in Aughton, Lancashire, is announced by Daniel Hayes called X-Net BBS. It appears to be unrelated to the XNET network mentioned above, but is the official BBS of Risc World Public Domain Library. Running *ArmBBS* on a 4Mb A3010 and supporting speeds up to 19200 bps, opening times are 4pm – 10pm weekdays and 9am – 10pm at weekends using ringback. Daniel promises a massive filebase and a very friendly reception to all callers.

X-Net BBS
(01695) 422825

Contacting me

Send me any Acorn-interest URLs you find, and I'll publish a selection. Contact me by writing to David Dade, Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: DaviD@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181-654 2212.

Power mad

POWER, they say, is addictive. The more you have the more you want. But when it comes to processor power, it seems the software writers conspire to make power essential. We suspect their sole task in life is to take the best hardware on offer and push it to its limit, with the sole purpose of forcing the rest of us to upgrade our systems so we can run the stuff.

Having decided the SX33 wasn't up to the task of running the new generation of Pentium-inspired Windows software, I decided to try out the fastest card currently available, the Pentium class AMD 133Mhz.

It didn't take long to install. Physically changing the cards over takes seconds. Upgrading the software takes just a little longer. Firstly, you need a new version of *!PCConfig* in order to set options the old version doesn't support. I then tried to run the card but found my old version of *!PC* couldn't cope either – it simply hung. So having swapped the supplied *!PCx86* for my old *!PC*, and ferreted around in the Risc PC boot sequence to ensure the correct programme was called on start-up, everything fired up as normal – except somewhat faster.

But how much faster? The theoretical speed increase of a 133Mhz Pentium class chip over an 486/33 should be considerable. I have to admit that the observed improvement feels less impressive than I'd expected. Having said that, everything (almost) runs faster. Delays that irked before have either disappeared or become far less irksome, and some games that were simply not worth attempting are now playable. But I can't help being aware that P100-plus powered boxes in the 'real' PC world operate considerably faster. In an environment optimised for RISC software, even a Pentium class chip struggles a bit.

So I reckon it's a good start – but only a start. As compatibility problems become less of an impediment to using DOS/Windows-based software in the Risc PC, so improvements in sheer raw speed rise to the top of the agenda.

Of course, it's pure speculation at present, but it will be interesting to see what StrongARM and the Hydra board can do for *!PC*. Certainly, StrongARM should speed up *!PC* considerably. Conceivably, a Hydra board with, say, your old chip in parallel with the new one, could make short work of the endless data shuffling that *!PC* has to get through to sort out its graphics – interesting!

Go faster bytes – !PC96

REGULAR readers will know that *!PC* is set to get better in several ways. It has already been through many incarnations which have improved compatibility and speed. The latest version of *!PC* under development at Aleph 1 (and recently dubbed *!PC96*), is, to a large extent, aimed at improving speed.

It's too early to say exactly what will be released and when – at the time of writing Aleph 1 and Acorn are undecided. I'm told software under development includes:

- Shared memory disc drivers: nearly doubling the CD-ROM transfer rate and increasing effective Hard Disc performance. The benefits should be faster application loading, an improvement to many CD-based games and smooth video replay. Biggest improvements should be felt with 4x CD-ROM drives. Faster ones will still be held back by data transfer rates through *!PC*.
- Shared memory video drivers: no test figures yet but will markedly increase video speed under windows (but not DOS).
- Windows 95 support: installers for drivers, fixes for screen corruption on startup, crashes on shutdown and on hardware checks.
- WinG support (good news for fans of Dorling Kindersley's CD-ROMs for example).
- Simpler Windows 3.1 installation.
- VESA support for modes bigger than VGA which should mean some more modern games will run.
- VGA speed tweaks – VGA will run a tad faster.

The software will also fix a few hitherto recalcitrant bugs and fully support the new AMD CPU cards.

So that you can decide what to spend your money on, here are Aleph 1's Winstone 96 Summary benchmark results comparing different processors and software using an otherwise identical (typical*) setup.

This shows a range of improvements from around 20 per cent to over 50 per cent for the new software – which compares favourably with chip upgrades.

*Arm610; 8Mbyte RAM allocated to PC card; PCDOS 6; 700Kbytes allocated to video; 800x600x256p screen; Vcache present; 128K L2 cache

	WIN3.1		WIN95	
	!PC1.92	!PC96	!PC1.92	!PC96
SLC/33	6.2	7.3		
DX2/66	9.1	11.2		
DX4/100	9.6	12.3		
5x86/100	10.4	14.2	8.3	12.8

The quest for joy

I've had some questions about games and, in particular, joysticks. Games are a problem area as they tend to require maximum processor speed and direct access to hardware. Even Windows 95, which is supposed to isolate the program from the silicon, has a 'directX' facility which gives programmers a short cut to the video hardware. Aleph 1 hasn't supported that (yet?), so some popular games like *The Hive* won't run.

I can't vouch for it but there is a patch available for one brand of joystick. The program is called *PCjoy* and can be found on Aleph 1's ftp site. If anyone can give more information on *PCjoy* do let me know.

Confirmed games players can also find *PCjoy* together with a listing of games that run, those that don't, plus those that do with provisos (e.g. *most of the sound won't work*) on the Web, courtesy of Mike Enderby and Max Palmer. This is well worth a look and also suggests other places to go hunting for info.

Games list:
http://www.interpages.co.uk/acorn
Aleph 1:
ftp://ftp.aleph1.co.uk/aleph1/

Supporting Acorn

A few issues ago a correspondent suggested that a PC column in an Acorn magazine was hypocritical. Since that criticism could equally be applied to attempts to make PC cards perform better, this seems like a good time to answer it.

If it wasn't for the PC card, I would probably have had no option but to desert Acorn and bought a PC – simply because the great unthinking masses (well I'm partisan, aren't I) use them. And I have to work with them. As it is, my money is still mostly spent with Acorn and Acorn-oriented companies maintaining a largely British industry. 'Nuff said?

Contacting me

You can contact the PC page by writing to me, Mike Buckingham, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, Cheshire, SK10 4NP, or e-mailing to aupcpage@idg.co.uk

Networks

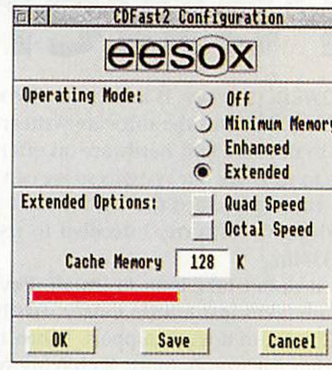
Go faster stripes for your CD-ROM

CDFAST2 is a newly re-vamped utility by acknowledged CD-ROM expert Eesox which is designed to improve the performance of most CD-ROM applications by using intelligent data caching algorithms. *CDFast2* runs in four different modes, offering a trade between speed and computer memory.

In simple terms, the more speed you want, the more memory it consumes. CD-ROMs are not noted for their speed, but significant gains can be made with all types of drive using *CDFast2*. If you've got a dual speed (or less), *CDFast2* may be regarded as a minimum requirement.

NetCDFast2 offers similar gains for those using CD-ROMs across a network.

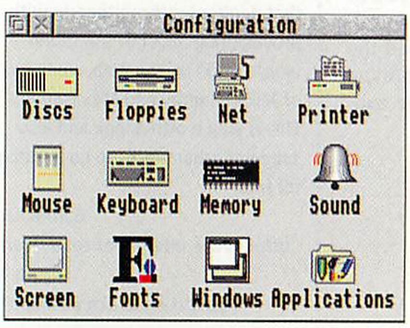
CDFast2 costs £25+VAT or £15+VAT if purchased with a CD-ROM drive. Eesox may be contacted on (01954) 212263 or e-mailed at eesox@cityscape.co.uk



CDFast2 offers significant speed improvements, especially across a network

Configure problems

AS I outlined in the April issue, the ease with which Acorn computers can be reconfigured makes them very versatile machines indeed. Unfortunately, in the hands of mischievous children, the computer can be configured to almost stop working. Cannon Computing has a module to prevent access to the command line, and since then I have received two more methods of protection, one of which is on the cover disc.



A versatile feature of RISC OS, but in the wrong hands it can be a nightmare. Protecting this is like a dream come true!

CMOS Control from Software7 at £5 is a utility which enables you effectively to write protect the CMOS RAM in your computer. It works by simply intercepting the system call used to write to the CMOS RAM. This is done using legal system calls, so it should work on all models of computer.

The program is a relocatable module, and as such occupies only 384 bytes of memory. It cannot be killed without the special program supplied for that purpose, and it can also be password protected. It prevents all *Configure commands but allows temporary changes (eg creating a RAMdisc) via the Task Window. It also prevents changes to filing system wipe/copy options.

Software7 may be contacted on 0141-641 3478 or e-mailed at software7@digibank.demon.co.uk

CMOS Protect from Andrew Kemp is on the cover disc. It is similar to the previous solution, but does not have the benefits of password control and there is no method supplied for killing it. The only problem I have with this module is that you can't create a RAMdisc whilst the module is present. However, it does protect the filing system wipe/copy options. Thanks for that Andrew, and to everyone else who offered solutions.

Network Page no more

I originally suggested running a network page because, at the time, there were a significant number of schools attempting to build and run Acorn networks.

The software available was new and not without its problems, and several people were turning to the magazine for help. Time moves on, and hopefully, with the help of *Acorn User's* Network Page, the problems appear to have been largely overcome and the puzzles solved.

Therefore we have decided not to continue with this column but to devote the space to topics which will benefit a wider audience. Of course, I will still field technical queries about networks, and we will continue to review new network software as and when it becomes available.

For those new to networks or who are considering creating a network, could I take this opportunity to unashamedly plug my book, *Network Acorn*, which is published by SEMERC, who may be contacted on 0161-627 4469. Also, if you haven't already seen it, the July 1994 issue of *Acorn User* (No 144) contains 13 pages about networks. These articles might be over two years old, but they are not out of date.

Tip for the month

The last couple of tips have really been aimed at network managers, so for the last one we have a tip aimed at users. If you try to save work into your user area and you get the error message 'Insufficient Space', don't immediately begin deleting pieces of work that you may need later. Instead, see the network manager and ask to have your user area increased.

The network manager will set the maximum amount of space available to you when s/he creates your user profile. I usually set the space at 1Mbyte, which is about 20 per cent more than a standard floppy disc. Some students produce a great deal more work than others and so will need their space increased.

RISC OS 3.6 and Server

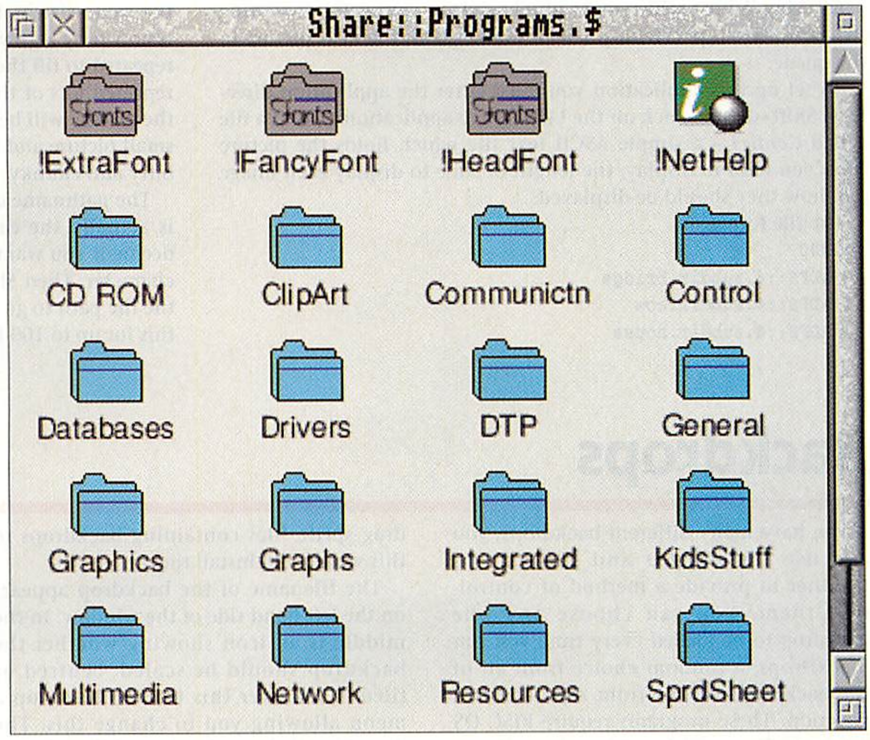
THOSE who have A7000 computers on the network may have discovered a few problems if using an old version of *Server*. The latest version of *Server* (at the time of writing) is 1.33, which should solve any problems you may be experiencing.

Why network?

Geoff Preston looks at the advantages of networking

Of all the letters I receive, most are asking for technical support. I've featured several articles based on some of those letters, and looking back over the last few months, I feel that a casual on-looker may consider a network too much of a liability. This is certainly not the case and I feel it's time to redress the balance.

Running and/or using a network can be great fun, but it can be a huge pain in the neck – to put it as politely as possible. Many Information Technology coordinators are used to running the department single handed. Those that are used to juggling floppy discs will assume that a network has to be easier, so they jump in feet first and begin networking. That, I feel, is where the problem begins. A network is not *easier* than handling floppies or even local hard discs, but it is *different* and will generally require support in the form of a technician. Certainly that is true of any school-wide network.



What will it provide?

From the students' point of view, two things. Firstly, they no longer have to be restricted to one or two applications per lesson, nor do they have to use versions of the software which have been specially cut-down to fit onto a floppy.

Having access to unlimited software can be regarded as a mixed blessing, because youngsters may very well be tempted to go exploring rather than do some work. That aside, the ability to be able to load more than one program and several fonts, without having to supply every student with a pile of floppy discs, must be seen as a big plus.

Secondly, referring to a school-wide network, students can start a piece of work in one place, continue in another and, if necessary, print in a third place. This means that if a student wishes to continue work, but the Information Technology room is occupied, s/he can go to another terminal and continue where s/he left off. That is a major benefit which students at my school have enjoyed for several years.

From the teacher's point of view, also two things. Firstly, the alternatives (floppies and local hard drives), are too much of a liability for any more than a handful of computers. Floppies get damaged and hard discs need updating. It's just not a viable proposition.

Secondly, and in a way more importantly, if every student is provided with a user area they can place all their work in it. It doesn't necessarily need to be printed, it can stay there and grow as the students progress through the school.

At any time, hard copies can be taken from the contents of any user area. At my recent OFSTED inspection, I was asked to provide a sample of work from the students.

Rather than wandering around the school scavenging bits from notice boards and trying to track down work saved on unnamed and unlocatable floppies, I simply logged on to the network as the manager and printed out the contents of each of the named students' user areas.

Because all the computers are linked, information can be passed amongst them. For example, live teletext is available for every network user at my school, everyone can also access up to eight CD-ROMs plus print to either a colour printer or to any one of the five laser printers.

Distributing all of these resources does have a price, of course. If you wander around my school you'll see about a dozen high-spec computers with messages on the screens telling students that under no circumstances should they be used. These are the file-servers, printer spoolers and CD servers.

The downside

From the students' point of view, just one. Loading software is slower than from a local hard disc, and at times when there is a lot of network traffic, I believe it's even slower than a floppy disc.

From the teacher's point of view, I think the biggest headache is looking up passwords for children who have lost it or forgotten it, or tried to change it and forgotten it, or given it to their friend who's no longer their friend and has now changed the password after deleting the entire contents of their user area. In the early days I was looking up a dozen passwords per day. Nowadays, it's a lot less.

Occasionally, the whole system falls down, usually because someone has dragged one of the leads and caused a short-circuit in the Net. When this happens, it can take anything between two minutes and an hour to locate the fault. Once located, it's usually only a minute or so to fix.

The verdict

I was one of the first schools to network Acorns with the networking standard known as ethernet. For the first year or two it was like being at the white-hot tip of technology. Things have now improved out of all recognition: the bugs have been ironed out, and the system is much more reliable. I wouldn't consider teaching in a school without a network now.

AllChange

Mike Smith

AllChange changes the backdrop of the machine once every X centiseconds. This value is user defined. I have set my machine to 12,000 centiseconds, or once every two minutes.

If you are getting bored with the image on the backdrop you can click the icon on the iconbar with Select and the image revolves to the next one in the queue.

Clicking Adjust will remove the backdrop completely reverting to a plain desktop. Clicking Select resumes with the next picture in the queue.

To set up this application you must enter the application directory. Shift+double-click on the !AllChange application to find a file called *Config1* – a simple ASCII text file which holds the picture titles you wish to display, the length of time to display each image and how they should be displayed.

The file format is:

```
12000
C ADFS::4.subdir.bridge
T ADFS::4.subdir.cow
S ADFS::4.subdir.house
```

The 12000 is the number of centiseconds you wish each image to be displayed. This must be the first value on the first line and you're only allowed one time limit. Thereafter you specify each image and how it is displayed, where it is found and what order it plays it.

There are three options in setting up a backdrop: C = Centered, T = Tiled, and S = Scaled. If the image is Centered it will be exactly the same size as the image but in the middle of the screen surrounded by a grey background. Tiled means that the image will be repeated to fill the screen at a 1:1 size ratio – small pictures will be repeated lots of times and big images once or twice. Scaled means the picture will be made to fit the screen once so if you have a very small picture and a very big screen mode the backdrop will be very bitty and chunky.

The pathname of the picture appears to be the hardest bit, but it is actually the easiest. With Config1 loaded into !Edit or !Zap, decide if you want the picture to be T, C or S – type it plus a space character. Then Shift+drag the picture file on to the line you wish the file path to go and it will be inserted automatically. You can do this for up to 100 files.

Backdrops

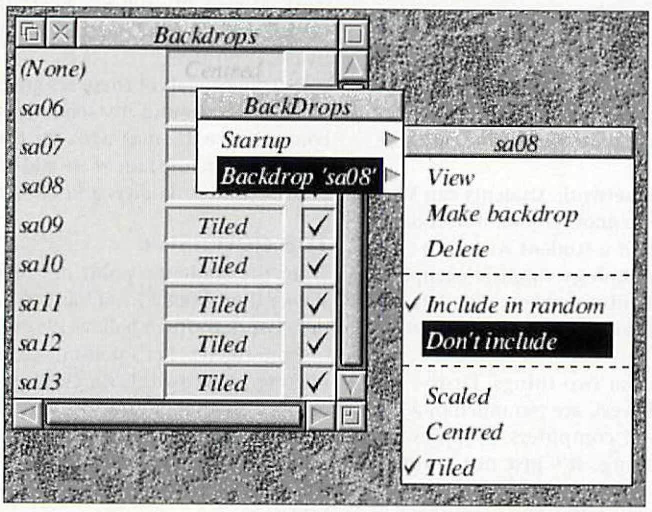
Andrew J. Booker

If you have many different backdrops, you can use !BackSetUp and !BackDrops together to provide a method of controlling them. You can choose any one backdrop to be loaded every time you run !BackDrops, a random choice from all of the backdrops or just from a pre-defined selection. These programs require RISC OS 3 to run. They will be easier to use if you have a hard disc, but there are no problems with using floppies.

Two applications are provided: !BackSetUp is used to setup the backdrops you want to use, and !BackDrops will choose a random backdrop after you have set things up with !BackSetUp.

Double-click on the !BackSetUp icon in the Filer. The icon will then appear on the icon bar. Click Select on this icon and a main window will open showing all the backdrops currently installed. Initially this will contain only one backdrop, *None*. You can drag sprite files containing backdrops to this window to install them.

The filename of the backdrop appears on the left hand side of the window. In the middle is an icon showing whether the backdrop should be scaled, centred or tiled. Click over this icon to bring up a menu allowing you to change this. The default is tiled. On the right of the window is an option button. If this is on for a particular backdrop, that backdrop will be included in the choice from which the random choice is made.



Clicking menu anywhere over this main window brings up a menu. The top entry is *Startup*. Moving the pointer right from this entry brings up a submenu showing all the installed backdrops, with the addition of *Random* at the top. One of the menu entries will be ticked; this shows which backdrop should be used when !BackDrops is run. Choosing any menu entry will make the new choice the backdrop that is used.

When you have set everything up in the window, quit the !BackSetUp program, and add a line similar to:

```
Filer_Run
<Boot$Dir>.!BackDrops
```

to your boot sequence, after the desktop has started. The !BackDrops program will select your backdrop, or a random one.

Further information is contained in the help file.

Great Extras

- Three great games cheats for *Alone in the Dark, Burn Out* and *Xenon II*.
- *Herbert and Harry Go To Mars* by Garry M. Spooner, an example of what can be done with *Ultima*.
- David Matthewman's HTML page examples
- CMOS RAM re-configuration prevention software

Countdown

Neill McNeill

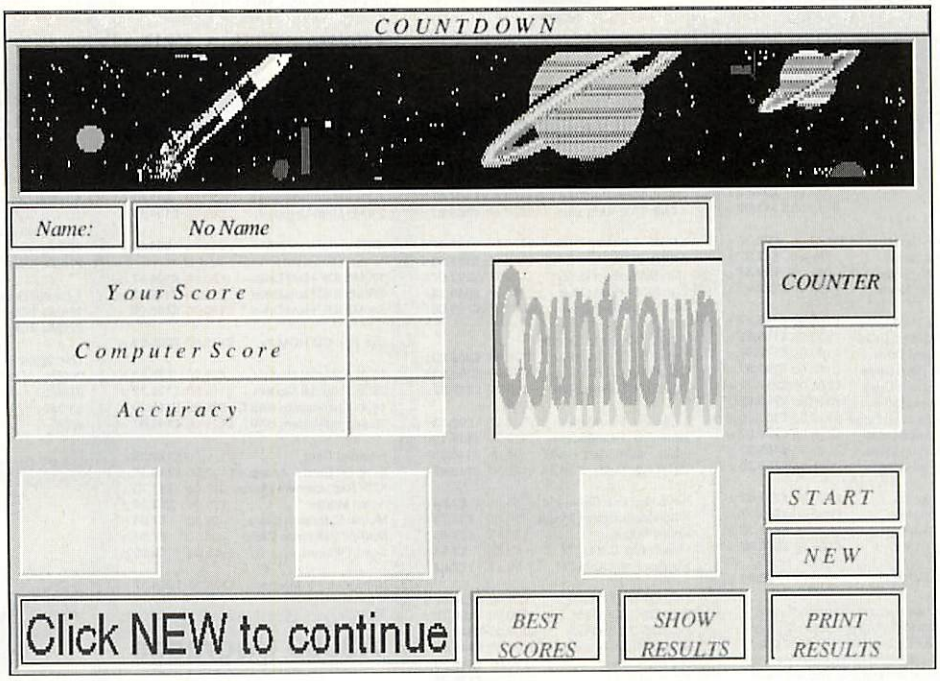
Countdown is a highly motivating program for pupils to test their knowledge of multiplication tables, and their speed at doing calculations.

To play, click New, enter your name, press Return, then click Start. You get a fixed time in which to answer as many questions as you can.

To set the options, click Menu over the Countdown icon to reveal a table. Click to turn the timer On or Off. To begin with, the timer is on. Click All to test a specific table from 1 to 12 plus All.

You can change the level. Levels 1-3 are simpler and only include examples with multiplication. Levels 4-6 are more difficult and use division as well. Click New and the *Countdown* icon conceals the settings.

Note that the same options are used for each player until changed. The program will now provide problems with a time limit of 30 seconds if the timer is on, or 10 examples will be provided.



Regular items

- Run the Risc's FM radio controller software
- *INFO contains a plethora of demos, utilities and applications to keep you busy. Unfortunately, due to space considerations, we have not been able to include all the *INFO programs – those that have been missed will be included next month.

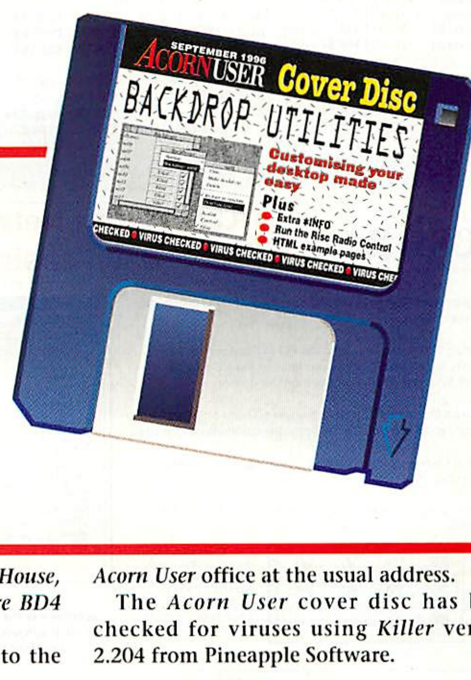
Those with Internet access will find the missing programs on the *Acorn User* web site: http://www.idg.co.uk/acornuser/

- Wimp C continues building the special library of routines to make creating applications much easier.

Disc information

The software on this disc has been compressed using *ArcFS 2* from VTi, and is opened by running a copy of *ArcFS* then double-clicking on the archive to open it. There is a copy of *ArcFS* on the disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.



Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.*

If it verifies successfully return it to the *Acorn User* office at the usual address.

The *Acorn User* cover disc has been checked for viruses using *Killer* version 2.204 from Pineapple Software.

Kimberley

Kimberley Computers Ltd.
Dept ACU10, 73 Chapel Street, Leigh,
Lancashire, WN7 2DA UK.

Tel +44 (01942) 677777
Fax +44 (01942) 672300

Email Sales@kcsprem.demon.co.uk
or info@kcsprem.demon.co.uk

8X CD ROM Players

Suitable for Risc PC 600/700/A7000



Enhance your computer by adding a Super Fast 6 Speed CD ROM.

No extra hardware required, simply fits on to the existing IDE interface in your computer. Takes 10 minutes to install, all drivers and leads supplied.

Supports CD-I, Mpeg, Kodak, etc 900Kb/Sec <190Msec, 256Kb Cache, Quick Play Button, Multi Session.

CD ROM 6x £75.00 d £88.13

270Mb 2.5" Hard Drives

Suitable for A3000/A3010/A3020/A4/IBM Portables



Enhance your computer by adding a Fast 170Mb Hard Drive.

Allows the Acorn to run faster. Stores the equivalent of 217 full 800k Diskettes. Easy to fit, Instructions, Screws & Cable provided. Should take no more than 10 minutes. Requires Risc OS v3 or above.

Note: A3010/A3000 also require an IDE Interface

170Mb 2.5" IDE £99.00 d £116.32

RPC Upgrades

	Ex Vat	Inc Vat	
1Mb Vram	£55.00	£64.62	b
2Mb Vram	£120.00	£141.00	b
4Mb 72 Pin Simm	£25.00	£29.37	c
8Mb 72 Pin Simm	£45.00	£52.87	c
16Mb 72 Pin Simm	£85.00	£99.87	c
32Mb 72 Pin Simm	£189.00	£222.07	c
540Mb IDE Hard Drive	£125.00	£146.87	d
850Mb IDE Hard Drive	£135.00	£158.62	d
1Gb IDE Hard Drive	£149.00	£175.07	d
1.2Gb IDE Hard Drive	£165.00	£193.87	d
1.6Gb IDE Hard Drive	£185.00	£217.37	e
2Gb IDE Hard Drive	£215.00	£252.62	e
540Mb SCSI Hard Drive	£135.00	£158.63	d
1Gb SCSI Hard Drive	£189.00	£222.07	d
2Gb SCSI Hard Drive	£345.00	£405.37	f
4Gb SCSI Hard Drive	£680.00	£799.00	f
PC Card SXL-33	£199.00	£233.82	e
PC Card DX2-66	£249.00	£292.57	e
PC Card DX4-100	£299.00	£351.32	e
PC Card 586-100	£499.00	£586.32	e
CPU FAN COOLER	£8.50	£9.99	b

Did You Know that the chances of your ARM processor failing are much higher if you have a PC Card fitted. The PC Card raises the operating temprature of the ARM Card, to combat this, you will need a PC CPU Cooler. **Highly Recommended**

	Ex Vat	Inc Vat	
Hex (6x) CD Rom IDE	£75.00	£88.12	e
Oct (8x) CD Rom IDE	£78.00	£91.65	e
Quad (4x) CD Rom SCSI	£75.00	£88.12	e
Oct (8x) CD Rom SCSI	£185.00	£217.37	e
Arm 710 Upgrade	£125.00	£146.87	c
2nd Slice (inc PSU)	£99.00	£116.33	e
2 Slot Backplane	£30.00	£35.25	b
16 Bit Sound Upgrade	£59.00	£69.32	c
MIDI Port Podule	£45.00	£52.87	c
User Port Analogue/MIDI	£99.00	£116.33	c
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
RPC Technical Ref Man.	£50.00	£50.00	e
Heavy Duty Keyboard	£25.00	£29.37	e
RPC Std Keyboard	£25.00	£29.37	e
Keyboard Ext. Cable 2M	£6.50	£7.64	b
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Ext. Cable 2M	£6.50	£7.64	b
Monitor Ext. Cable 2M	£6.50	£7.64	b
14.4k Ext. Fax/Modem	£79.00	£92.82	e
28.8k Ext. Fax/Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
15" FST Monitor 0.28dp	£225.00	£264.37	f
17" Monitor 0.28dp	£480.00	£564.00	f
17" Monitor 0.26dp	£535.00	£628.62	f
21" Monitor 0.26dp	£ Call	£ Call	f

A5000 Upgrades

	Ex Vat	Inc Vat	
2-4Mb Mem Upgrade	£89.00	£104.57	b
4-8Mb Mem Upgrade	£229.00	£269.07	d
540Mb IDE Hard Drive	£125.00	£146.87	d
540Mb SCSI Hard Drive	£135.00	£158.63	d
1Gb SCSI Hard Drive	£189.00	£222.07	e
2Gb SCSI Hard Drive	£545.00	£640.38	f
4Gb SCSI Hard Drive	£680.00	£799.00	f
All CD Roms are External			
Twin (2x) CD Rom Par.	£175.00	£205.63	e
Quad (4x) CD Rom SCSI	£175.00	£205.63	e
Oct (8x) CD Rom SCSI	£245.00	£287.87	e
14.4k Ext. Fax/Modem	£79.00	£92.83	e
28.8k Ext. Fax/Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
Keyboard Ext. Cable 2M	£6.50	£7.64	b
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Ext. Cable 2M	£6.50	£7.64	b
Monitor Ext. Cable 2M	£6.50	£7.64	b
Risc OS 3.1 Chipset	£29.00	£34.07	b
Risc OS 3.1 Full Kit	£50.00	£58.75	e
Risc OS 3.1 10 Pack	£290.00	£340.75	e
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
Float. Point Accelerator	£115.00	£135.12	c
User Port Analogue/MIDI	£55.00	£64.62	c

A4000 Upgrades

2-4Mb Mem Upgrade	£83.00	£97.52	b
540Mb IDE Hard Drive	£125.00	£146.87	d
540Mb SCSI Hard Drive	£135.00	£158.62	d
1Gb SCSI Hard Drive	£189.00	£222.07	e
Keyboard Ext. Cable 2M	£6.50	£7.64	b
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Ext. Cable 2M	£6.50	£7.64	b
Monitor Ext. Cable 2M	£6.50	£7.64	b
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
All CD Roms are External			
Twin (2x) CD Rom Par.	£175.00	£205.63	e
Quad (4x) CD Rom SCSI	£175.00	£205.63	e
Oct (8x) CD Rom SCSI	£245.00	£287.87	e
14.4k Ext. Fax/Modem	£79.00	£92.82	e
28.8k Ext. Fax/Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e

A3010 Upgrades

	Ex Vat	Inc Vat	
1-2Mb Mem Upgrade	£39.00	£45.82	b
2-4Mb Mem Upgrade	£89.00	£104.57	b
IDE Interface for 2.5"	£55.00	£64.62	c
170Mb IDE Hard Drive	£89.00	£104.57	d
270Mb IDE Hard Drive	£99.00	£116.32	d
540Mb IDE Hard Drive	£160.00	£188.00	d
Ext. Par. CD ROM 2x	£175.00	£205.62	e
14.4k External Modem	£79.00	£92.83	e
28.8k External Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Extension Cable	£6.50	£7.64	b
Monitor Extension Cable	£6.50	£7.64	b
Scart TV Lead	£8.50	£9.99	b
Microvitec 14" Monitor	£225.00	£264.37	e

A3000 Upgrades

1-2 Mem Upg Non Exp.	£25.00	£29.37	b
1-2 Mem Upgrade Exp.	£55.00	£64.62	b
2-4 Mem Upgrade Chips	£79.00	£92.82	b
1-4 Mem Upgrade	£114.00	£133.95	b
Serial Port upgrade	£19.00	£22.32	b
IDE Interface for 2.5"	£55.00	£64.62	b
170Mb IDE Hard Drive	£89.00	£104.57	d
270Mb IDE Hard Drive	£99.00	£116.32	d
540Mb IDE Hard Drive	£160.00	£188.00	d
14.4k External Modem	£79.00	£92.82	e
28.8k External Modem	£115.00	£135.12	e
14.4k Fax/Modem BABT	£99.00	£116.33	e
28.8k Fax/Modem BABT	£125.00	£146.87	e
Ethernet Card	£110.00	£129.25	c
Ethernet Card & Access+	£122.00	£143.35	c
KCS Replacement Mouse	£10.00	£11.75	b
Acorn Mouse	£20.00	£23.50	b
Mouse Extension Cable	£6.50	£7.64	b
Monitor Extension Cable	£6.50	£7.64	b
Scart TV Lead	£8.50	£9.99	b
		£9.99	b
Risc OS 3.1 Chipset	£29.00	£34.07	b
Risc OS 3.1 Full Kit	£50.00	£58.75	e
Risc OS 3.1 10 Pack	£290.00	£340.75	e
AKA32 Acorn SCSI Card	£125.00	£146.87	c
Std SCSI Card	£99.00	£116.33	c
Podule Casing	£20.00	£23.50	c
MFM Interface	£15.00	£17.62	b
User Port Analogue./MIDI	£55.00	£64.62	c
800k Floppy Disk Drives	£38.00	£44.65	c

- 800k In Stock (dealer Enquires Welcome)

Syquest

Internal Drives	Ex Vat	Inc Vat	
105Mb SCSI	£99.00	£116.32	e
EZ 135Mb SCSI	£89.00	£104.57	e
270Mb SCSI	£150.00	£176.25	e
270Mb IDE	£150.00	£176.25	e
External Drives & PSU			
105Mb SCSI	£99.00	£116.32	e
270Mb SCSI	£160.00	£188.00	e
Cartridges			
200Mb	£52.00	£61.10	b
270Mb	£38.00	£44.65	b
135Mb	£15.00	£17.63	b
40Mb	£37.00	£43.47	b

Scanners



Scanlight 256	£129.00	£151.57	e
Scanlight 256 Video	£189.00	£222.07	e
Flatbed A4 Colour			
Mustek SP2400dpi SCSI	£270.00	£317.25	e
Epson GT 5000 SCSI	£379.00	£445.32	e
Epson GT 8500 SCSI	£429.00	£504.07	e
Epson GT 9000 SCSI	£529.00	£621.57	f
HP Scanjet 4c SCSI	£645.00	£757.87	f
Vision 24 Digitiser	£65.00	£76.37	e
Hi-Vision Digitiser A5k	£90.00	£105.75	e
ImageMaster & Twain	£25.00	£29.37	b

Speakers



80w Speakers & Amp	£25.00	£29.37	e
240w Speakers & Amp	£38.00	£44.65	e
300w Speakers & Amp	£45.00	£52.87	e
Microphone	£7.00	£8.22	b
Clip On Microphone	£6.50	£7.64	b

Stylus 820



720 dpi Monochrome Inkjet Printer
Upgradeable to Colour - 3 Year Warranty
Epson Stylus 820 £155.00 £182.12 e

Stylus Colour IIs



720 dpi Colour & Black Inkjet Printer
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Stylus Colour II



720 dpi Photo Real Colour Inkjet Printer - 3 Year Warranty, Double Density Black. Prints on to Plain, Coated & Glossy Paper & OHP's.

Supplied with Acorn Drivers on request.
Stunning Output - Turbo Driver Available
Epson Stylus Colour II £250.00 £293.75 e

Arcshare

Acorn to PC Networking Software

PC to Acorn Networking has never been easier than this!

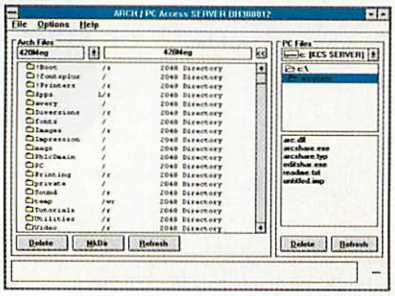
Arcshare is a program that runs from the PC, and fools the PC into thinking it is an Acorn Access system.

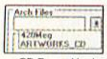
This gives that option of copying files from the PC to the Acorn or vice versa. Using an easy to use point & click interface on the PC you can quickly retrieve files from any Acorn computer on the network.

Any size of file can be transfered. If a file is transfered from an Acorn to a PC, then back again, you'll find that the filetypes are automatically updated.

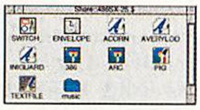
Ring today, tp find out how Arcshare can help you integrate PC systems to existing Acorn networks.

Note for Programmers: Arcshare can now support DDE Calls from the PC, ring for further details.





CD Roms, Hard Drives & Other Acorn Computers can be used by the PC



The PC Directory looks like just another Acorn Directory, thanks to Automatic Remote filetyping. Just drag & Drop the file using the Acorn interface.

Very easy to use!

Arcshare is the Only PC-Acorn network software that allows file transfers both ways !



Latest Version of Server now includes a DDE Interface!



Arcshare Server £99.00 b £116.33

New Products New Products

SPARE PARTS

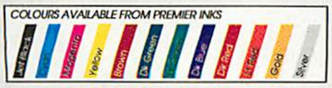
We now hold a large stock of Genuine Acorn and Compatible spares for most models of Acorn Computers (From Risc PC to BBC's).

Full Spares Catalogue on Disk, Send Disk & SAE or Email your Request.

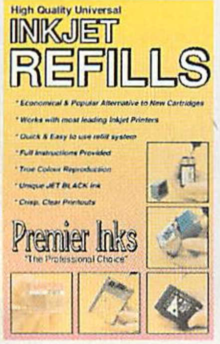
Old ACORN Software To CLEAR

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Using Premier Inks refill kits are an economical way of Re using your existing print cartridge. Don't throw it away, refill it - Over 130 printers supported, including the most popular makes. Call for sample printouts.



	Ex Vat	Inc Vat	
Single Refill Kit 1x22ml	£5.10	£5.99	a
Twin Refill kit 2x22ml	£9.35	£10.99	a
Tri Colour refill Kit 3x33ml C/M/Y	£14.46	£16.99	a
Quad Refill Kit 4x22ml	£17.01	£19.99	a
Bulk 1 Refill Kit 1x125ml	£17.87	£21.00	b
Bulk 2 Refill Kit 1x250ml	£32.34	£38.00	b
Bulk 3 Refill Kit 1x500ml	£42.55	£50.00	b
Bulk 4 Refill Kit 1x1Ltr	£59.57	£69.99	c

did you know?

Typical Example P100 16Mb

Win 95 | Works 4 | Iniguard | Encarta

Kimberley Computers also sell IBM compatible PC's & Components

Multi Media P133

- Intel Pentium P133 CPU & Cooler
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- Mini Tower Case
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- 16 Bit Stereo Sound Card
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- Microsoft Windows 95
- Microsoft Works V4
- 3 Button Mouse
- 12 Months On site Warranty

£1230.00 £1445.25 F



Interest Free Credit

Available on Most PC Systems, Written Detail on Request

Extension Cables

Extension Cables	Ex Vat	Inc Vat	
5 Pin Din Ext. 2M	£6.50	£7.64	b
PS2/Keyboard Ext. 2M	£6.50	£7.64	b
15 Pin D vga/svga Ext. 2M	£6.50	£7.64	b
9 Pin D Serial Ext. 2M	£6.50	£7.64	b
25 Pin D Serial Ext. 2M	£6.50	£7.64	b
Acorn Mouse Ext. 2M	£6.50	£7.64	b
Hot/Cold Mains Lead 2M	£5.00	£5.88	b

Comms Cables

9/25 Pin - 9/25 Pin Laplink	£8.50	£9.99	b
BI Directional Data 25 Pin D	£11.00	£12.93	b
25 Pin D M-F RS232 2M	£6.50	£7.64	b
9 Pin D M-F RS232 2M	£6.50	£7.64	b
9 Pin D - 25 Pin M Modem	£6.50	£7.64	b
Archimedes Modem Cab 2M	£8.50	£9.99	b

Printer Cables

BI Directional 2M	£2.55	£3.00	b
BI Directional 3M	£5.00	£5.88	b
BI Directional 5M	£7.00	£8.22	b
BI Directional 10M	£12.00	£14.10	b
Serial Printer Cable 2M	£6.50	£7.64	b
BBC Printer Cable	£6.50	£7.64	b
Centronics 36w-36w 2M	£6.50	£7.64	b
Centronics 36w-36w 2M	£8.50	£9.99	b

Networking Cable/Accs

BNC Cable/Plugs 2M	£5.00	£5.88	b
BNC Cable/Plugs 3M	£6.00	£7.05	b
BNC Cable/Plugs 5M	£8.00	£9.40	b
BNC Cable/Plugs 10M	£13.00	£15.28	b
BNC HQ Cable Reel 100M	£60.00	£70.50	b
BNC Terminator	£2.00	£2.35	b
BNC Solderless Crimp Plug	£1.25	£1.47	b
BNC Strain Relief Boot	£0.50	£0.58	b
BNC In Line Connector	£2.00	£2.35	b
BNC T Piece	£1.50	£1.75	b
BNC Wall Plate	£7.00	£8.22	b

Internal Cables

4cm IDE Cable 2.5"	£5.00	£5.88	b
6cm IDE Cable 2.5" (Acorn)	£6.50	£7.64	b
Twin Floppy Cable (PC)	£2.55	£3.00	b
Single IDE Cable 18"	£2.00	£2.35	b
Twin IDE Cable 18"	£2.55	£3.00	b
Custom IDE Cable	ASK	ASK	b
5.25" Power splitter	£2.55	£3.00	b
3.5" Power Splitter	£2.55	£3.00	b
CD Audio Cable Generic	£2.55	£3.00	b

Acorn to Monitor

A300/3000 - CM8833 Mk2	£8.50	£9.99	b
A300/3000 - CM8833 Mk1	£8.50	£9.99	b
A300/3000 - CM8833 Scart	£8.50	£9.99	b
A300/3000 - Amstrad CPC	£8.50	£9.99	b
A300/3000 - AKF30	£8.50	£9.99	b
A300/3000 - AKF50/Msync	£8.50	£9.99	b
A3010/4k/5k - CM8833 Mk2	£8.50	£9.99	b
A3010/4k/5k - CM8833 Mk1	£8.50	£9.99	b
A3010/4k/5k - CM8833 Scart	£8.50	£9.99	b

Switch Boxes

Switch Boxes	Ex Vat	Inc Vat	
2 - 1 Printer (Centronics)	£11.75	£13.81	b
4 - 1 Printer (Centronics)	£15.75	£18.51	b
2 - 1 Printer (Serial 25 Pin)	£11.75	£13.81	b
4 - 1 Printer (Serial 25 Pin)	£15.75	£18.51	b
4 Comp. - Mon/PS2 Keyb	£15.75	£18.51	b
4 Comp. - Mon/5 Pin Keyb	£15.75	£18.51	b
2 - 1 Serial Switch 25 Pin	£11.75	£13.81	b
4 - 1 Serial Switch 25 Pin	£15.75	£18.51	b
2 - 1 Scart Switch Box	£11.75	£13.81	b
4 - 1 Scart Switch Box	£15.75	£18.51	b
2 - 1 BNC Make b4 Break	£11.75	£13.81	b
4 - 1 Printer Auto Sharer	£46.00	£54.05	b

Dust Covers

Acorn A5000	£7.00	£8.22	b
Acorn A4000	£7.00	£8.22	b
Acorn A3010/A3020	£4.50	£5.29	b
Canon BJ10 (Not with ASF)	£4.50	£5.29	b
Canon BJ200/4000	£4.50	£5.29	b
Canon BJ600/610	£4.50	£5.29	b
HP Deskjet 500 series	£4.50	£5.29	b
HP Deskjet 600 Series & 850	£4.50	£5.29	b

Inkjet Cartridges

Canon BC01	£14.00	£16.45	b
Canon BC02	£15.00	£17.63	b
Canon BJC4000 - Black Tank	£7.00	£8.22	b
Canon BJC4000 - Col Tank	£12.00	£14.10	b
Canon BJC4000 - Col/Bk. H	£21.00	£24.68	b
Canon BJC600 - Black Hcap	£8.00	£9.40	b
Canon BJC600 - Cyan	£6.20	£7.29	b
Canon BJC600 - Magenta	£6.20	£7.29	b
Canon BJC600 - Yellow	£6.20	£7.29	b
Canon BJC800 - Black	£13.50	£15.86	b
Canon BJC800 - C/M or Y	£17.00	£19.98	b
Canon BJ30/70 - Black 3 Pk	£10.50	£12.34	b
Canon BJ70 - Colour Tank	£14.50	£17.04	b
Canon BJ300/330 - Black	£11.50	£13.51	b
Integrex 132 - Black	£10.02	£11.77	b
Integrex 132 - Colour	£18.00	£21.15	b
Epson Stylus Col - Black	£12.00	£14.10	b
Epson Stylus Col - Colour	£22.00	£25.85	b
Epson Stylus Col II - Black	£12.00	£14.10	b
Epson Stylus Col II - Colour	£22.00	£25.85	b
Epson Stylus 800/1000 Black	£8.00	£9.40	b
HP 310/Portable High Cap	£16.00	£18.80	b
HP Deskjet 500 - Black	£16.00	£18.80	b
HP Deskjet 500 - Tri Colour	£20.00	£23.50	b
HP Deskjet 600 - Black	£19.25	£22.62	b
HP Deskjet 600 - Tri Colour	£22.00	£25.85	b
HP Deskjet 850 - Black	£19.25	£22.62	b
HP Deskjet 850 - Tri Colour	£22.00	£25.85	b
Olivetti JP150 - Black	£15.25	£17.92	b
Olivetti JP150ws - Black Ref.	£32.00	£37.60	b
Olivetti JP350/450 - Tri Col	£28.00	£32.90	b

Large Range of Ribbons, toner, Labels, Paper, Diskettes, Software, Hardware, Always in stock, call for your requirements.

Thinking of buying a 5x86 PC card for your Risc PC?

Think Again....

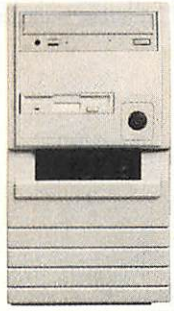
Why not buy a complete 5x86 PC - Here's How:

Buy a Complete system with a monitor & keyboard switch box. This gives you complete compatability & it runs a lot fatser than the PC card will. Has its own 8Mb RAM, a fast 6x CD ROM, Large Hard drive, fully expandable system. This system comes with the New PQ Adapter which makes this CPU outperform a Pentium P100 -

5x86 100Mhz CPU
PCI Motherboard
1Mb PCI SVGA Card
8Mb RAM
850Mb EIDE Hard Drive
6x CD ROM
16 Bit Stereo Soundcard
Mini Tower Case
1.44Mb Floppy Drive.
Switch Box &
All Cables

"Don't Delay, Buy one Today!"

£499 + Vat



Compared to:

Acorn 5x86 PC Card @ £499 Ex Vat

Atomwide ISAdapter @ £299 Ex Vat

Microsoft Software

Microsoft Software	Ex Vat	Inc Vat	
Publisher v2	£45.00	£52.88	b
Publisher for 95	£69.00	£81.08	b
Money v2	£25.00	£29.38	b
Works v3	£39.00	£45.83	b
Works v4 for 95	£69.00	£81.08	b
Office Professional v4.3 3.5" Disks	£210.00	£246.75	e
Office Professional v4.3 CD Rom	£210.00	£246.75	e
Office Professional for Windows 95	£275.00	£323.13	e
Word 6	£225.00	£264.37	e
Word 7 for 95	£225.00	£264.37	e
Excel	£225.00	£264.37	e
Excel for 95	£225.00	£264.37	e
Powerpoint	£225.00	£264.37	e
Powerpoint for 95	£225.00	£264.37	e
Access	£225.00	£264.37	e
Access for 95	£225.00	£264.37	e
Windows 95 Upgrade	£59.00	£69.32	b
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Scenes - Hollywood Collection	£29.00	£34.07	b
Scenes - Brain Twister	£29.00	£34.07	b
Scenes - Sports Extremes	£29.00	£34.07	b
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Many more titles available, please ask for a full list.

Most of this software should work on the RPC PC card, but check before you order it.

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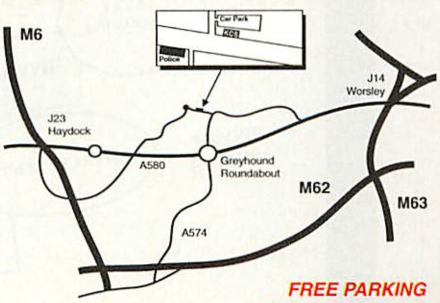
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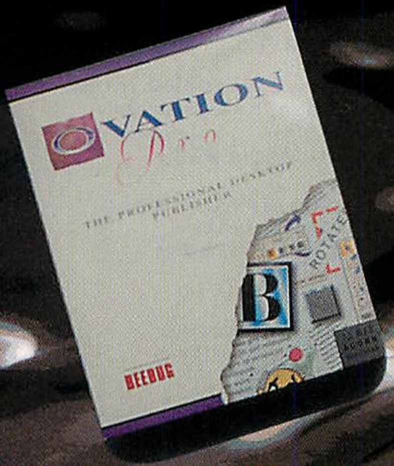


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DTP excellence

An overview

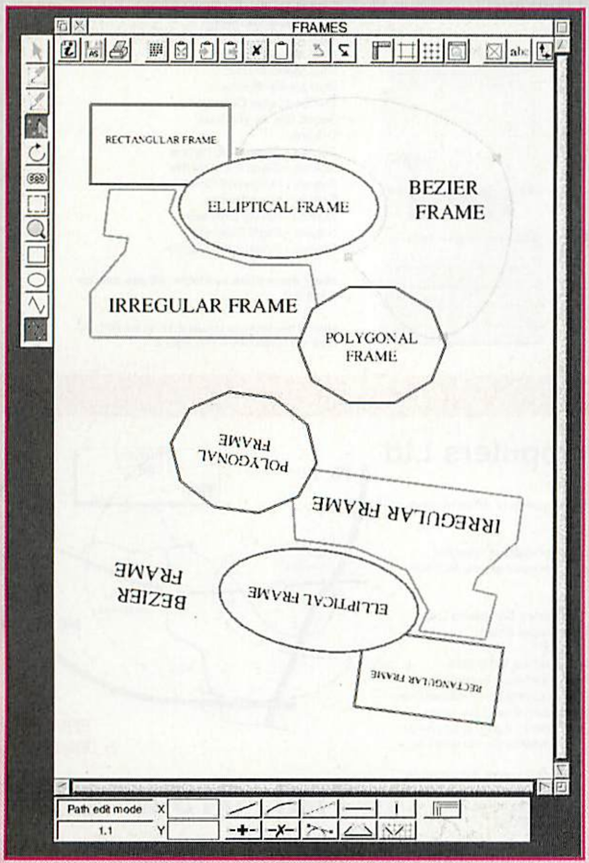
by Jack Kreindler

Many are the number of very capable word processors on the Acorn platform. But as far as desktop publishing is concerned one name has reigned unchallenged for nearly half a decade – *Impression*.

The question that has loomed in *Impression* users' minds since the darkest hours that saw the rise of Xara and the fall in Computer Concepts concern with Acorn is, "Where would Acorn DTP be without *Impression?*"

Many see Beebug's latest release as the possible answer, but true to the fact that you must go right through to end of the tunnel to reach the light, it has taken a long while for Beebug to release *Ovation Pro*, 'the professional desktop publisher'. Another view, and one that is held by the producers of *Ovation*, is that any new DTP release should not concentrate on Impression's merits or faults but instead address the needs of today's DTP users, right up to a professional level, irrespective of those features much wanted but much lacking in current Acorn packages.

It should be noted that though it runs to speed and is relatively bug free, *Ovation Pro* is still only the first release of a package currently in vigorous development. Certain features will be available at no extra cost by the end of the year including powerful image control, professional printing and typesetting areas all excluded from the first release.



Standing Ovation

Even before installing the program the package strikes you with quality. *Ovation* is bundled with a well-written and attractively designed User Guide, Tutorial and Quick Reference Guide. This professionalism is very much in keeping with recent important releases on the Acorn platform but it is always impressive to see that no corners have been cut from the outset.

The software proper is loaded off several discs with many optional extras such as the latest version of *Bubblehelp*, dictionaries, graphics and text loaders. I cannot fairly comment on the quality of the program and toolbar icons, something which I often do when reviewing a package, because various parts of the interface including the all-new scroll and quill application icon were designed by yours truly.

Only when you click on the icon to generate the default A4 master page do you begin to see where Beebug has ignored convention in their interface design. There are three main areas of action as far as buttons, tools and the like are concerned. The first is the toolbar attached, as in any design program on the Acorn, to the side of the document window. One could be mistaken for thinking that the program was in fact a graphics package from the look of the toolbar. *Artworks* springs to mind at first glance.

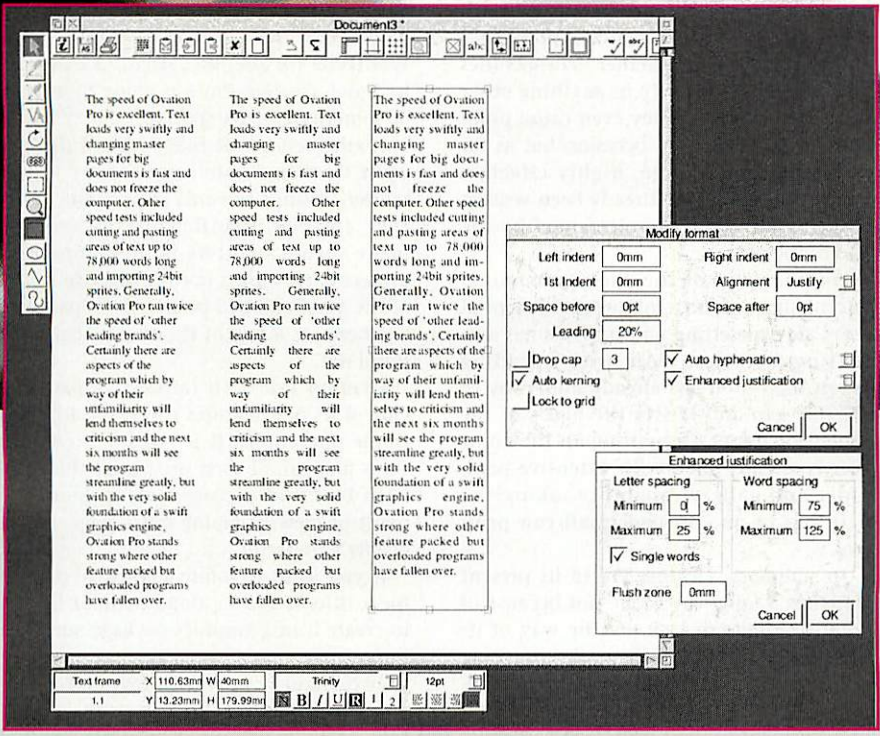
A quick bit of experimentation and a peep into the printed tutorial reveal the purpose of all the drawing tools. Now you realise that *Ovation* is not just a word processor with the ability to alter frames ways and add pictures, but a dedicated page design package.

Creative publishing is all about defining discrete areas of the page and then manipulating them and the text or graphics that you insert. As the toolbar suggests, creating pages in *Ovation* does not limit you to dragging out cuboidal frames – you can literally draw your page. The toolbar provides the ability to draw standard cuboids, ellipses, lines and curves as frames which all become bounded by a frame box. (Additionally there is a window that can plot regular polygons as frames.

This border can be manipulated to alter the aspect of the frame and another tool on the bar allows the vectors which make up the frames to be edited. Associated with the toolbar is the context sensitive info panel which defaults to the bottom of the page. This, in path edit mode, reveals more editing features for frame manipulation than anyone could wish for.

To describe the list of possibilities is unfeasible here but the raw tools include bezier path editing, selection and manipulation of non-consecutive points, joining and breaking of points, point addition and deletion, convert to line and curve and very usefully, straighten to vertical and horizontal lines. All frames can be rotated and their text edited at any angle of

In the following pages you will read three views of Ovation Pro; a general review; an experienced Impression user's impression (pun intended) and finally what a pagesetter who uses QuarkXpress professionally thinks of the package



rotation. This is, of course, an invaluable aid for elaborate page design.

The toolbar also includes buttons for page magnification, picture cropping and frame linking and all buttons have their respective info panel extras. Thankfully, both tool and info bar are free floating in relation to the document, *Artworks* style. This is advantageous when working on specific areas of page in a large screen mode by reducing premature mouse mat wear from excessive cursor movements.

Fixed to the top of the page is a scrolling button bar. The buttons are not functions directly pipelined into the application code but instead operate via macros based on a simple programming language which *Ovation* calls Script. *Ovation Pro*'s macro function exemplifies one of the key features of the package; the ability to customise functions. The default bar includes icons for file info, save, print etc, but open the macros dialogue box and over 100 pre-defined macros, almost all with their own icon, can be selected.

Unfortunately, the button bar is only one stack high which means that with all the macros selected, if that be your desire, it takes a fair while to scroll through all the buttons, though you can juggle their positions along the bar by drag-dropping. Practically every function of the program can be executed via the existing macros. But where the macros come into their own is in user-definable functions.

Super script

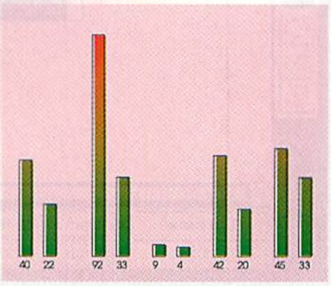
As I mentioned earlier, *Ovation Pro* uses Script language to carry out macro functions. This is actually a subset of C, but *Ovation Pro* does not require that you be a programmer to create new macros. Simple ones such as incorporation of your name and address with a customised icon perhaps is not the ballpark of computer programmers. If I can manage it without even needing the manual, most can.

Revealing the fact that beneath its user-friendly exterior, this is a program written by programmers for programmers, the manual houses nearly 30 pages of the *Ovation Pro* Script language functions for the more cerebral among us. A few examples of what can be achieved using the script language to its full are included on disc. Anything from button push macros to new menus and windows can be made to appear. One of the basic but effective examples supplied is 'fancy date'. This superscripts the 'th's', 'nd's' and 'rd's' on inserting the active date.

A more advanced example is the calculator which on a definable key short-cut scans numbers on a line and then with another key press inserts the sum at the cursor. This is an area where I am sure *Ovation Pro* will satisfy the demands of

Speed comparison table

	Impression Publisher 5.06	Ovation Pro
78,000 word paste	40	22
78,000 word select & delete	92	33
78,000 word text import	9	4
78,000 word change to multi-column master frame	42	20*
1.8Mb 24-bit sprite import (8-bit screen)	45	33



*also did not freeze the computer

(Risc PC 600, 32Mb, 2Mb VRAM)



many users with specialised DTP requirements and perhaps avoid the need for program jumping in some cases.

Although this is only the first official release version of the package, *Ovation Pro* v2.26 left me with a much stronger impression of what the program can do as opposed to what it cannot or cannot yet. One of the examples of this is the undo and redo feature. I could fill a skip with the amount of hair wrenched from my scalp having made a critically bad move while page setting.

One wrong key press while on autopilot and several hours work down the plughole. Sound familiar? Make a serious error in *Ovation Pro* and just as you reach for your hair line, in a moment of extreme frustration, you remember the little undo icon. One click and the sun is shining again. It is quite surreal at first.

The speed of *Ovation Pro* is excellent. Text loads very swiftly and changing master pages for big documents is fast and does not freeze the computer. Other speed tests included cutting and pasting areas of text up to 78,000 words long and importing 24-bit sprites. Generally, *Ovation Pro* ran twice the speed of 'other leading brands'.

Certainly there are aspects of the program which by way of their unfamiliarity will lend themselves to criticism. The next six months will see the program streamline greatly, but with the very solid foundation of a swift graphics engine, *Ovation Pro* stands strong where other feature packed but overloaded programs have fallen over.

Much thought has gone into speed of processing text and the Characters window is one trait of this. One key press and up pops a window displaying the whole font set. Select the font you desire and click. No need to change font, load Chars and all that. Another is the enhanced justification which kerns the spacing between individual letters according to user definable rules sliding text masterfully into tight frames. Newsletter and magazine publishers will no doubt be happy and more advanced paragraph handling such as widow and orphan removal are planned.

Page layout is greatly aided by the Pasteboard feature which, unlike Bleed, is a non-printed area outside of the page onto which frames can be dragged. This is especially useful when performing complex page compositions with multiple images. Sticking with images, a great time-saver is the crop tool which basically resizes the graphics so that the area dragged out fills the frame.

It would take more than the length of the package's 200 page User Guide to describe and praise all the little features. Great care has been taken to ensure that the raw speed and comprehensive page design facets of the package has been complemented by many document processing utilities, making *Ovation Pro* as much a word processor as a desktop publisher.

Absent without leave

Although graphics can be rotated and skewed comprehensively, graphic handling has some way to go. True colour graphics are not actively dithered in lower colour screen modes and there is no facility to alter the colour balance of graphics.

It is questionable whether *Artworks* files will ever work perfectly in anything other than CC programs. They even cause problems in *Impression* on occasion but as far as bitmap graphics go, highly effective image processing has already been written and should be fully implemented by the end of the year.

Another part of the package missing, but missing only to a minority of potential users are typesetting and professional outputting facilities. Work with a leading Acorn repro house is already underway to fill this gap and satisfy the needs of the professional user. Outputting for the home user is already good with extensive pamphlet and gallery capability taking the pain out of one off and small run print jobs.

In summary, *Ovation Pro* in its present state has a long way to go, not because of what it admits to lack, but by way of its huge potential. It already marks a turning point in Acorn DTP and with the reliability of Beebug to continue support and improvement of their software I can easily see industry standard in Acorn DTP changing towards *Ovation Pro* and its successors.

The experienced Impression user

Martin Hill is an experienced DTP user who uses Impression for anything from letters to 40-page booklets

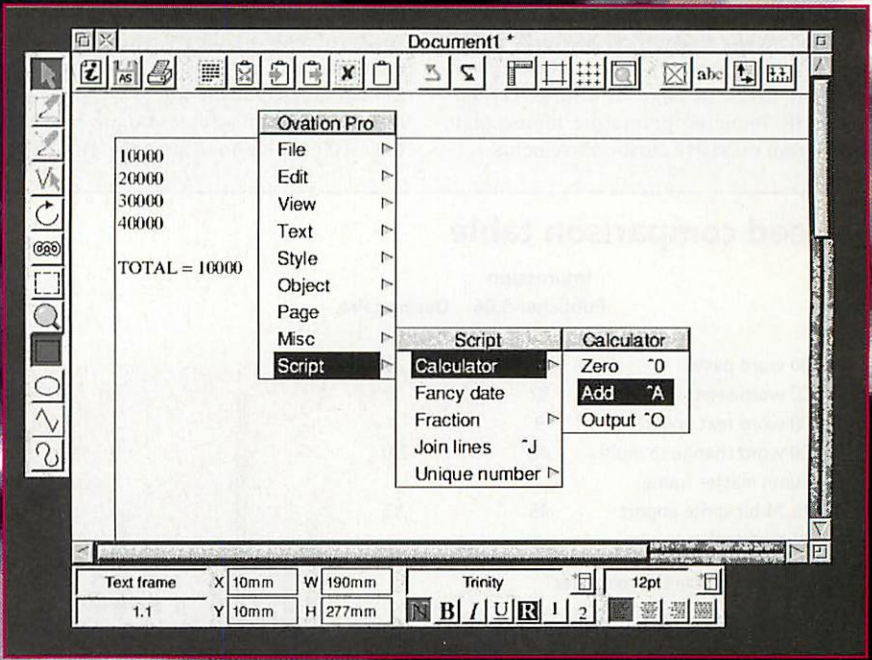
When I first started playing with *Ovation Pro*, I thought it would be very difficult to write a review that did not compare it straight to *Impression Publisher*. Given that *Impression* is about the best package ever to happen to Acorn since *WordWise* for the BBC Micro (a classic in its time), *Ovation Pro* was going to have to be something pretty special.

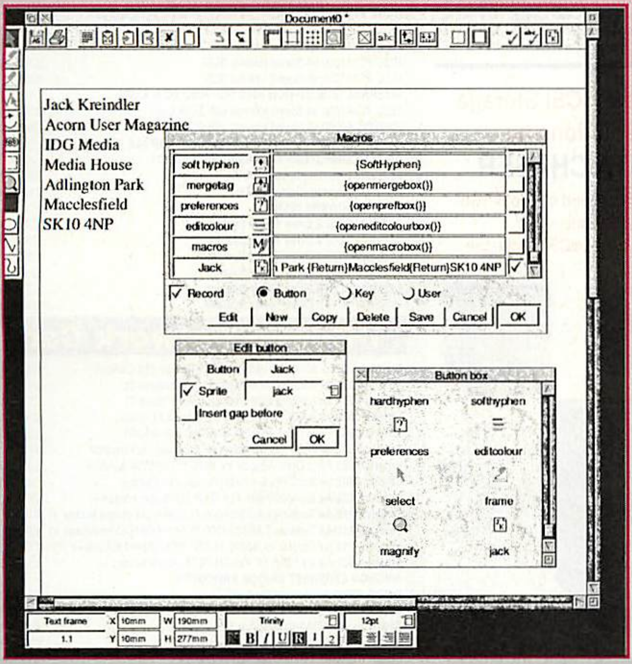
I will even admit that I almost did not want *Ovation Pro* to supplant my warm, tender feelings towards *Impression*. However, *Ovation* is sufficiently different to make such a point-by-point comparison unnecessary. This is not the place to list all of the good and bad points of the package, but here are a few of the things that most stand out.

Ovation Pro is an impressive package. One of its best features is the versatility of frame operations. It is possible to rotate, skew and do all sorts of strange things to both text and picture frames. From the point of view of laying out a page, this is deeply wonderful.

If you want to rotate a word 90 degrees for a title, it can be done without having to create it in a graphics package and then import it.

Text frames can also be irregular and so you can have them in any strange shape that grabs your fancy. In addition, it is possible to wrap text around frames with pictures in any number of ways. Other features include an undo/redo function and





also colour handling. All of which are extremely useful.

As regards text editing, all the standard operations are readily available on the 'info palette' such as bold, italics and even superscript and subscript – which is useful. Given all this, there are some rather nifty effects available that I have never seen elsewhere. This does not mean that they cannot be found on other packages, just that I have not come across them. Of these, the one that most impressed me was 'enhanced justification' which kerns individual letter pairs in the selected text. This makes text look far more impressive and also tends to crush words more effectively into the space. Other useful extras include automatic drop caps and advanced hyphenation, as well as tracking and kerning controls.

Despite this, there are a few gripes about the package. One is that some of the things that the manual says the program can do have not actually been implemented yet. These include 'drag and drop' text with the mouse, and also the use of sexed quotes. These are all there in theory, but did not appear to work in the version that I received.

Also, it is arguable that the package is too powerful, with too many menus and numbers to be typed in and not enough on-screen editing. For example, it seems tab settings cannot be changed just by moving the marker, boxes need to be called up and various keys need to be pressed. Even though this is no great hassle, it does niggle, although the use of macros may be able to cut out some of these unnecessary key presses out.

When I first started using the package, I found it to be unstable, as it tended to die horribly on even the most simple operations. This was actually due to the set up of the machine that I was running it on – a Risc PC 600 that has been 'optimised'. This machine is now the equivalent of a bored-out engine with a nitro booster on a car, it runs twice as fast, but ultimately is likely to explode – and so is not the fault of the package. But this is a note of warning for all those Acorn XR3i boy racers out there.

As a final note, *Ovation Pro* appears to incorporate many of the features of art packages in the way you can manipulate frames and play with text. Hopefully, future releases will go even further along this line. For example, it would be useful to be able to increase the size of text to fit frames, rather than guessing appropriate values, and also fitting text to curves would be nice.

Given all this, *Ovation Pro* looks as if it is going to set the new standard for DTP on the Acorn, although I still doubt that it will ever be as easy for me to use as *Impression*. The word 'pro' in the title is very apt.

The Quark user

Alan Capper is Art editor on *Acorn User*.

After just a few minutes working from the tutorial which is supplied with *Ovation* Pro, I was surprised at how similar the methods of creating items on the document were to *QuarkXPress*.

Starting a new document I was presented with a button bar which runs across the top of the page so I could quickly access frequently used menu items. At the left hand side is the toolbox which enables you to draw frames for text or graphics, edit frames or lines, zoom and rotate objects. At the bottom of the page is the info palette which gives information on particular aspects of operations you are performing. The functions of these buttons and palettes are explained in more detail elsewhere in this article but suffice to say that they make the positioning of text and graphics both easy and accurate.

One feature I like is how *Ovation Pro* allows you to use a standard frame to accept text or graphics. A graphic once inserted can be changed simply by dropping another icon on the frame or if you delete the graphic, text can be inserted and vice versa. Adding borders or rotating frames is easy and these can be accessed through the button bar options.

Another excellent feature is the character selector whereby you bring up a dialogue box, move your pointer over the required character and click with the mouse. This inserts the required character in the correct font where the cursor is positioned in the frame – a boon when using bullets or characters not easily accessible from the keyboard. You can achieve the same result by holding down the Alt key and typing the ASCII number and the character appears as you release the Alt key.

Text manipulation in DTP is very important, and *Ovation Pro* allows a variety of effects including bold, italic, horizontal scaling, kerning or tracking, and formatting text as left, right, centre and justified. The easiest way of applying changes is by the info palette and also to position a frame accurately within the document by typing in the x and y coordinates. You can define style sheets of font, type style, colour etc and then apply these directly to a range of text.

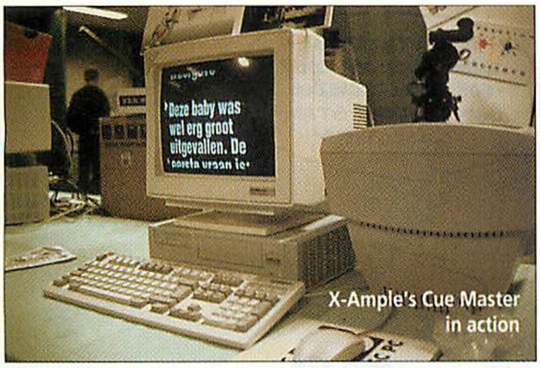
The colour palettes include the standard formats of RGB, HSV and CMYK options as well as generic and rainbow features. New names and values for colours can be created and applied to text, borders and backgrounds. Unfortunately there is no procedure for printing colour separations as CMYK, which is a must in the professional arena but Beebug promise this feature later in the year. I hope they give as much attention to detail to this as they obviously have to the rest of the program.

How does *Ovation Pro* compare to other DTP programs? It would indeed be an exceptional product to oust *QuarkXPress* – such are the powerful features of text handling, word processing, colour options and printing that *XPress* embodies – and why it deservedly holds number one position in the Macintosh DTP environment. That said, I like *Ovations'* ease of use and flexibility to give speedy access to its numerous functions and I prefer to use *Ovation Pro* than *Impression Publisher* for these reasons. It is an excellent DTP program which I am sure will win over many Acorn enthusiasts. AU

Product details

Product: Ovation Pro
Supplier: Beebug Ltd
Address: 117 Hatfield Road, St Albans, Herts, AL1 4JS
Tel: (01727) 840303
Fax: (01727) 860263
E-mail: info@beebug.co.uk
Price: £165 + VAT. An upgrade from Ovation 1 is £79 + VAT, an upgrade from another DTP/word processor packages is £99 + VAT

Dutch Acorns



X-Ample's Cue Master in action

Jill Regan visits Acorn Expo '96, an Acorn show in Utrecht, and finds a Dutch hardware firm with some innovative products

Utrecht – famous for its cathedral tower, its university, the modernist Rietveld-Schroderhuis designed by Gerrit Rietveld and a barrel-organ museum – was the venue of the Big Ben Club's Acorn Expo '96. The Big Ben Club is the club for Dutch Acorn users, and their members did a fine job of organising the show. It was a well attended event with hundreds through the door, located in a very upmarket hotel but with a relaxed, informal attitude.

There was a small British contingent of exhibitors, most of whom had decided to make a weekend of it. These included The ARM Club, *Archive* Magazine, R-Comp, Computer Concepts and Acorn Risc Technologies with Chris Cox showing the wonders of the StrongARM.

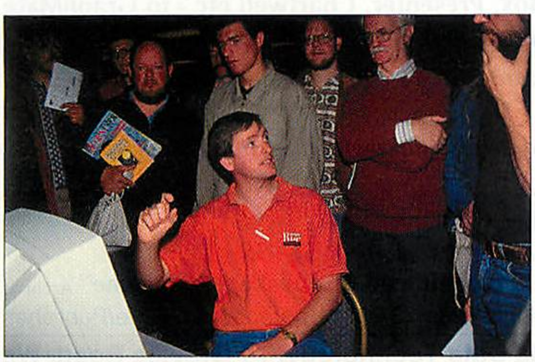
There were various Dutch companies including Acorn NL, Desk, ECD Computers and X-Ample Technology as well as the German Evolution Computer. There were also a number of stalls belonging to the Big Ben Club itself from different regions of the Netherlands, with more stalls running workshops on using Acorn computers, which were most instructive. There was even a Big Ben merchandising stall; you too could have been the proud owner of a Big Ben pen, disc holder or t-shirt.

Most companies were showing their latest versions of existing products. Probably the most exciting company was X-Ample Technology, a Dutch company who specialise in providing software and hardware on the Acorn platform for professional use. Paul Reuvers from X-Ample Technology explained: 'We haven't marketed the products yet – we wanted them to be taken on by large companies. In other words, we wanted a proven market before we did anything.'

X-Ample's products have been taken on by the Dutch Broadcasting Company (DBC), Lunn Poly and they are even working with Granada (the British company who supplies service stations to needy motorways). Acorn Expo '96 was the first real chance for Acorn enthusiasts to see this technology in action.

The first of X-Ample's products was *Cue Master*, an autocue package for film and television producers. These are used in most news and current affairs programmes, and game shows. Autocues are of course most apparent when Dennis Norden shows the effects of them going wrong on *It'll be Alright on the Night*, but they are in use faultlessly every day and are the life-line of most presenters. *Cue Master* can also be used in other types of programme as a prompt.

An autocue is basically a monitor with moving text that the presenter can read out with ease. *Cue Master* is based mainly around a re-badged A7000, although it can also be used on a Risc PC. It will work in any TV studio so long as the TV monitors use PAL standard.


An audience with Chris Cox

Apart from the obvious advantage of being based around an Acorn machine, *Cue Master* is simple to use, and can be quickly updated. The size of the fonts can be changed constantly, so if the presenter of a game show is moving around the studio they will still be able to read the autocue from a distance. Each presenter can have his or her own individual font and colour of font – all at the touch of a button and the click of a mouse – and the speed of the text can be continually changed.

Cue Master has a number of the advantages of a word processor. For instance, the producer of a show can prepare the text including their notes, but opt not to show them in the copy that the presenter reads. *Cue Master* spell-checks the text, and can import files from any platform.

The other exciting device X-Ample Technologies had on display was based around the famous set-top box (although an A7000 with a triple-screen plug in can also be used). This was a triple-screen cable view system which can connect to any make of TV with a SCART connection. The travel agency Lunn Poly has taken it up, allowing it to have three screens in a shop showing different information about holidays – a video, a price list and destination information, for instance, all of which can be updated.

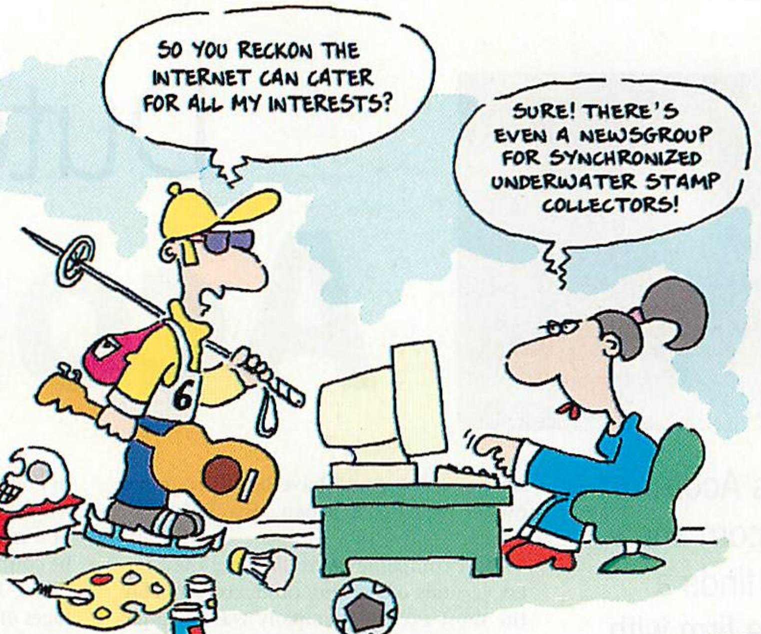
Granada is also interested in using this technology in it's motorway service stations. Tests are being done now at the Ilkeston service station. The idea is to have adverts, news, and road news, constantly updated from Granada's satellite radio system. If this takes off, it will be another interesting use of Acorn technology somewhere where you least expect it, and a vindication of Acorn's investment in Online Media. AU

Contact details

The Big Ben Club
Postbus 1189,
6801 BD Arnhem
Netherlands
http://www.wi.leidenuniv.nl/~rdevreug/bigbenclub.html

X- Ample Technology
Postbus 77, 5340 AB Oss
Scheldstraat 6, 5347 KG Oss
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Presenting the right image

In this issue's HTML tutorial, David Matthewman shows how to add images to your pages

Last issue I introduced the biggest of the big ideas in HTML – linking files to create a 'Web' of links. I only talked about linking text files but, of course, there's nothing stopping you linking the words 'nine-banded armadillo' with a picture of a nine-banded armadillo, a recording of its mating cry or video footage of it trotting like clockwork across the *Without Walls* title sequence. Assuming, that is, that your browser can display these things.

This in itself isn't a very difficult idea. To follow the diary metaphor we've been using, it's like writing 'see page 35 in photo album two' in your diary. Early HTML followed this scheme, but it quickly became apparent that it wanted a way to embed images in a page itself. Instead of having to go to the photo album and find the photograph, people wanted it to be glued into the appropriate place in the diary page.

<img>, a tag alone

Thus was born the **<img>** (image) tag. This contains details of an image, which the browser inserts into the HTML page alongside the text (assuming it can). Because an image is a self-contained 'entity', rather than something that affects an area of text like the anchor tag, the **<img>** tag does not have a closing **</img>** half. It stands alone; one of the few HTML tags that is entirely self-contained.

Suddenly, the world of HTML has become complicated. Remember that HTML is designed to be portable; an HTML document should be able to be read by any browser on any platform. If you're just designing HTML for your own personal use, this isn't going to worry you much, but if you intend to make it accessible on a public network (of which the Internet is just one example) you will need to consider the following:

- What if the person reading the document can't display graphics?
- What file format should I use? Text is more or less text, give or take a bit of EBCDIC encoding, but there are 1001 bitmap graphics formats.
- How big can I make my graphics? Full 24-bit scanned holiday snaps may be pretty, but they'll quickly clog up your hard drive and your network connection.
- How is the browser going to flow the text around the graphic?

Most of the rest of this article is devoted to answering these questions. But first, I'll explain how you tell the browser what image to display.

Remembering the anchor tag, it will come as no surprise that this is done with an attribute: in this case, the **src="file"** attribute, where the file is the image to be displayed. The **src** attribute is similar to the **href** attribute in the anchor tag, with the obvious difference that it points to an image. To include a sprite saved in a file *button1* in your web pages, use:

```
<img src="button1">
```

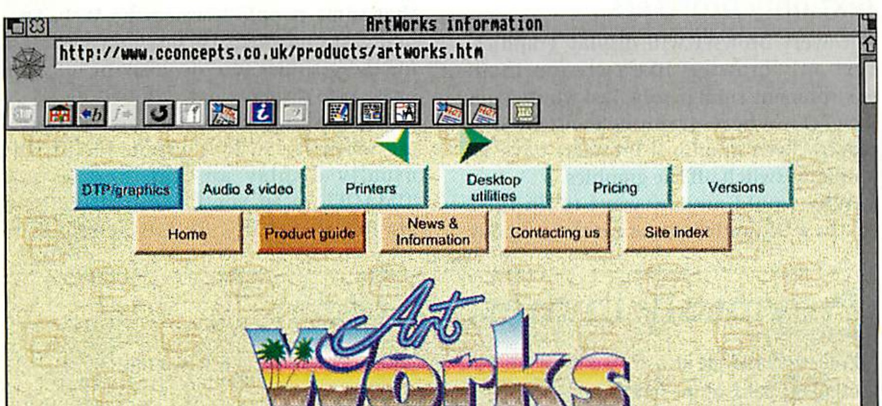
in the HTML. If the file's in a directory called *graphics*, use:

```
<img src="graphics/button1">
```

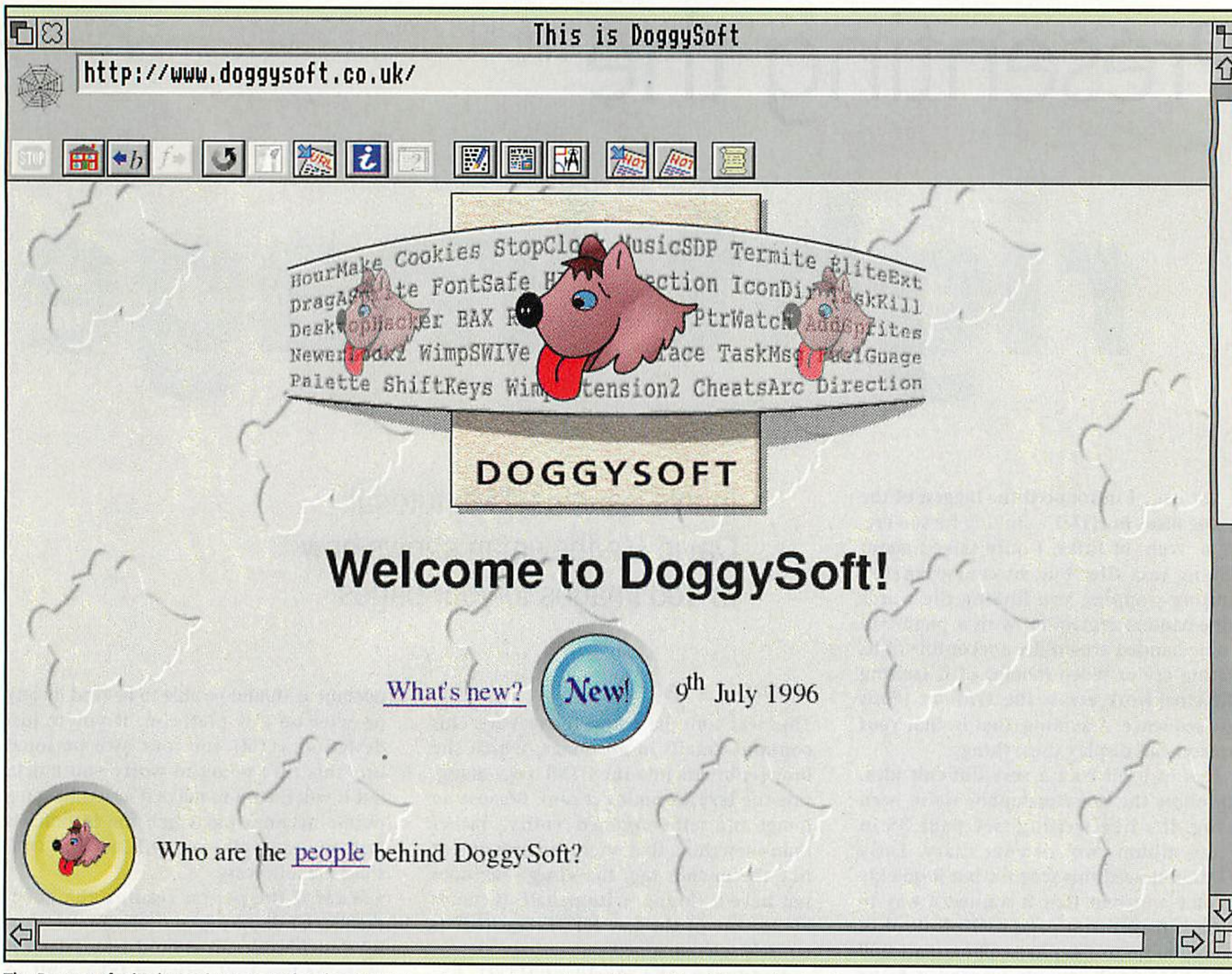
and if it's in the directory above the one that your HTML file is in, use:

```
<img src="../button1">
```

It's possible to reference graphics elsewhere on the Internet using URLs, just as



The same HTML in *ArcWeb* (top) with images turned on and (bottom) with them off, displaying the alt text



The Doggysoft site is a prime example of a site that makes good use of graphics, without becoming too large

you would other Web pages, but it's not a very common thing to do. Remember that graphics embedded in HTML actually appear on the pages; would you want to include a graphic on someone else's site, over which you had no control? For this reason, tags like:

```
<img src="http://www.cconcepts.co.uk
/graphics/homebutton.gif">
```

are uncommon, if legal HTML.

Graphics can be anchors, just as text can, and it's quite common to see a row of buttons linking to various destinations on a Web page with HTML similar to the following:

```
<a href="link1">
<img src="button1"></a>
<a href="link2">
<img src="button2"></a>
```

Most browsers will put a rectangular blue border round a graphic that's acting as a link, but you can usually stop them with the **border=0** attribute. This is the first HTML I've mentioned that isn't standard 2.0, but pretty well every browser supports it anyway.

Text-only browsers

Not every browser will display graphics. Text-only browsers like *Lynx* run in an environment similar to a Taskwindow on RISC OS, where graphics can't be displayed. Even graphical browsers have an option to switch off the graphics.

Why would anyone want to do this? Firstly, a text-only interface is the only one that some people have to the Web. Secondly, it's quicker; you don't have to wait for the graphics to download, or for your browser to display them.

When a browser encounters an **<img>** tag when it's in text-only mode, it will usually display an icon or the text '[IMAGE]' to let you know that there's a graphic there. This isn't as helpful as it

Previously in these pages...

I've introduced the idea of marking HTML up using tag pairs, of the form:

<tag> ... </tag>

at the start and end of the text being marked up. One such tag is the anchor tag <a>, used to link documents.

Tags can contain attributes – a set of variable/value pairs which provide additional information. In the anchor tag, that information is either where to link to (the 'href' attribute), or a label for the text allowing another anchor tag to link to it (the 'name' attribute).

When specifying files in tag attributes, the Unix conventions of file and directory naming apply: directories separated by a '/' character, parent directories referred to by '..', files case sensitive.

Thus the index file in the directory above would be referred to as:

the index file.

or similar.

More about the GIF format

The GIF format has a number of extensions that a Web designer can make use of, not all of them as well-supported on the Acorn as they might be. There are at least two GIF standards as well, but I'll concentrate on the later GIF89a standard, which is what most programs use nowadays.

Most importantly, GIF files can contain a transparency mask. Unlike sprites, where the mask is a separate layer, in GIFs the mask is created by labelling one of the existing colours in the GIF as transparent. In a 256-colour GIF with transparency, therefore, only 255 of the colours are visible. In a 16-colour GIF, only 15 are visible. *WebGIF* allow you to select the transparent colour by clicking on the GIF.

GIFs can also be 'interlaced'. In this format, the lines in the GIF are stored in the following order:

- Every 8th line, starting at line zero
- Every 8th line, starting at line four
- Every 4th line, starting at line two
- Every other line, starting at line one

In this way, the GIF can be displayed by the browser in stages, giving the effect of a picture coming into focus. This can be pleasing for large GIFs, but should not be used for small icons because it tends to push the file size up (the LZW compression doesn't work as well). Again, *WebGIF* offers the facility to do this either for an existing GIF or when converting sprites.

Not all browsers make use of interlacing when displaying GIFs, but *Webite* and *Fresco* on the Acorn (and *Netscape Navigator* and *Microsoft Internet Explorer* on other platforms) do.

GIFs also contain a palette. Where the GIF has been created from a sprite, that palette will be the sprite's palette. Usually, this is the standard 256 colours; it's only in RISC OS 3.5 that you were allowed to change the palette of 256-colour sprites, and very few programs around take advantage of this feature. This is a shame, because a GIF of, say, blue marble with a palette optimised to shades of blue will be very close to 24-bit in quality. It won't look any different in 256-colour modes, but will look *much* better in 32K and 16M colour modes. The only down side of this is that such GIFs tend to be larger than GIFs with a 'standard' palette.

Finally, GIFs (like sprite files) can contain a sequence of images, which browsers like *Netscape* will animate as a sequence of frames. The effect is over-used on the Web, but it is still a shame that (at the time of writing) such GIFs can neither be created nor viewed on the Acorn system. This may not be the case for long, though.

could be, as it tells you nothing about the image. It's particularly annoying if the image is a link, because you've got no way of knowing where the link points to.

Fortunately, if you add an **alt="text"** attribute to the tag, text-only browsers will display the text instead. The text can be what you like – a description of the graphics (where the graphic links to) or just a space-filling character – but it should *always* be included, to stop text-only browsers displaying the meaningless '[IMAGE]' text.

It's common, but not mandatory, to enclose the text within square brackets, so people reading your page with text-only browsers know the text replaces a graphic; this is especially common where the text replaces a button.

For instance:

```
<img src="mail" alt="[Contacting us]">
<img src="heading" alt="Welcome to Jeremy's home page">
<img src="blob" alt="*">
```

would all be good uses of alternative text.

Graphic formats

If your pages are going to be viewed on any machine other than an Acorn, you won't be able to use sprites for graphics. Nothing else understands them. There are two graphic formats in common use on the Web – GIF and JPEG – and which one you use depends very much on the illustration.

GIF is a bitmap format allowing up to 256 colours. It uses LZW compression to keep the file size small, meaning that GIFs with large areas of colour the same will export really well. Surprisingly, very few programs on the Acorn will export GIFs, but a couple of utilities (including *WebGIF* which was on the last *Acorn User* CD-ROM) will create them from Acorn sprites.

LZW compression is 'lossless', meaning that the GIF file is, pixel for pixel, exactly the same as the sprite that created it. GIFs are good for icons, line art and banner headlines, and should probably be tried first for any artwork.

JPEG is a format best used for photographs. It stores a 24-bit picture in a highly compact form at the expense of a variable amount of detail loss. The more detail lost, the smaller the file, and for most pictures a loss of detail of around 25 per cent is not noticeable and results in reasonable-sized files.

Most 24-bit painting packages and scanning packages will export JPEG files directly, and even if they won't, JPEGs can be created with the latest version of *ChangeFSI* and a host of other Freeware programs. You should avoid using JPEGs for most non-photographic artwork, as the loss of detail *will* be noticeable; it will make the picture appear fuzzy.

Reasonably-sized pictures

If you are putting your HTML on to the Web, remember that most users have relatively slow modems. They will not appreciate waiting for a massive file to download, only to find out that it's your idea of post-modernist art. Keep your graphics small, use them sparingly and only for a reason would be my guidelines for Web graphics. Of course, there's nothing to stop you having pages of fine art, if you warn people in advance that the pages will be a little graphic-heavy, but worth the wait.

Remember that most browsers will display text at least up to the point when they encounter a graphic. Therefore, give your viewers something to read while they're waiting. You can also use **height** and **width** attributes in your **<img>** tag (these values should be in pixels. Many browsers will then display all the text on a page before loading the pictures to fill in the gaps, since they know in advance how big the gaps are going to be.

Text alignment

The **<img>** tag has one other important attribute, the **align** attribute. This controls how text around an image is aligned. If you write:

```
<img src=... align="bottom">
```

the text after the image will be aligned with the bottom of the image. The same applies for **align="top"** and **align="middle"**.

The attributes **align="left"** and **align="right"** are slightly different; although they do indeed align the graphic to the left or the right of the page, many browsers will also flow the text round the graphic as well.

Don't rely on this happening, because it's certainly non-standard behaviour, but be aware that many browsers will do this. In fact, this is another salutary lesson against trying to have too much control over how your pages will look; the quirks of browsers will always defeat you in the end.

I've by no means exhausted what can be said about images on the Web, and it's a subject I'll return to later in the series. This is enough for now, though, and next issue I'll list the other tags you can use for marking up text.

Until then, on the cover disc is a file and a few images that demonstrate many of the principles I've talked about here. Feel free to edit the file and see the effect of any changes. AU

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A very special school

Jill Regan visits West Oaks school near Leeds

I'm visiting a school. A young boy comes running up excitedly asking for a spare disc as we walk down the corridor. We enter a classroom and the children start shouting *'une glace fraise'*. One of the boys jumps up and goes to the A5000 in the room and accesses a *Clicker* sheet with pictures of different flavoured ice cream and the French text that goes with them.

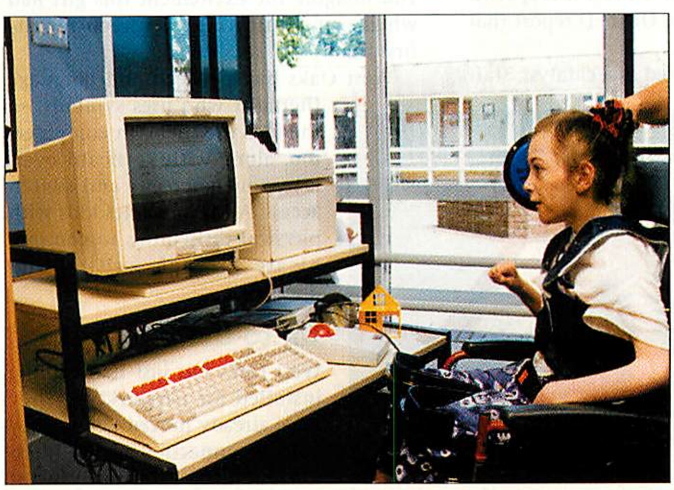
This could be any school, and the woman I'm with any IT advisor in the country. But it's not, it's West Oaks school in Boston Spa, and the woman is Elaine Hampson, a teacher for IT and special needs from EDIT Leeds, more familiar to some for the presentations she has given for Acorn and Xemplar. West Oaks has just got its OFSTED classification of 'very good' (the highest a school can get) and from September, Elaine will be the new deputy head.

West Oaks is an all-age generic special school which means it has children from ages 2 to 19. However, the tertiary section (16 - 19-year-olds) is based in a unit round the corner at the local comprehensive, which means the school is split into areas and they also have clearly defined primary, junior and secondary sections. The children move as they would in a mainstream school and follow the National Curriculum in the same way.

Special needs

The most obvious thing that sets West Oaks apart from many other schools is its pupils. West Oaks has children with a whole range of special needs: the severely autistic, those with behaviour difficulties as well as those who are often classed as PMLD having profound and multiple learning difficulties, but this seems to me to be a typically glib label of the sort that we often attach to anything that causes us trouble. Often such children have no difficulty at all in learning; it is *we* who have difficulty knowing how to teach them. Fortunately, West Oaks knows how to teach them very well, and gets its excellent reputation from enabling children such as these to follow the National Curriculum.

West Oaks believes that the curriculum is an entitlement for all children and they try to provide it through all sorts of experience. A lot of the experiences come through the use of computers and of enabling programs such as Crick Computing's *Clicker* and Widget's *Symbols*. The school has at least one Acorn computer in every classroom, ranging from A3020s to Risc PCs. Many are fitted with touch screens, switch access and roller balls, and they are used in all areas of the curriculum. The OFSTED inspectors said that they had never seen a school like it in the three years they have been inspecting.



Working together

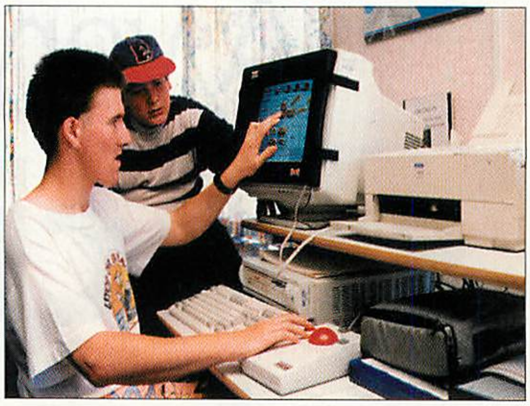
To wander around the school is an amazing experience. All around are beautiful displays of work of a very high standard. One which particularly caught my eye was of a business venture the school undertook in running their own lemon curd small business. As well as developing awareness of all the issues involved – production, accounts and marketing – this business had a tangible finished product which was very well received in the village, I understand.

It is very much a caring, sharing school, so children who themselves have difficulties will push others in wheelchairs and they take care of each other. Although staff and pupils are on first name terms, there is a great deal of respect between them (another aspect commented on in the OFSTED report). It soon becomes obvious to a visitor that a child's special needs are not a problem, that they can be worked around and the child can do what every other child does. This is not done with any great fuss – the children are not made to feel they are the odd ones out – their needs are simply accommodated in the background and the children are able to get on with a curriculum education.

Granted, the school does have a somewhat ideal position. It is situated in a busy village (which strongly supports the school) just north of Leeds off the A1. The majority of children do



not come from the village, however. Because of the school's reputation, children come from a wide area around, some having to leave home at 7am to be bussed there (the school runs its own transport).



The key to the school's success is its staff: its teachers, its school assistants and its nursery nurses, who all work extremely hard and are skilled at what they do.

The school's head, Hilary McEwan, is very forward thinking and is prepared to take calculated risks and make big investments. For instance, all the equipment is lease hired so it can always be updated. It isn't just equipment that's hired, either. Elaine explains: 'Last September, West Oaks bought my time from EDIT for consultancy and support for two and a half days a week. For them it was a considerable investment, and they backed it up putting money into hardware and software.'

Training the staff

It was Elaine who went through everything with the staff, getting them all to attend twilight sessions for 10 weeks. In that time, the staff went from nothing to all having computers up and running in their classrooms.

'When I first came here,' recalls Elaine, 'the head said that there is only one person I would not get near a computer: Jan Shaw in the art department. She was completely computer-phobic. It was just before Christmas and displays were going up, so I asked Jan if she wanted me to do her a banner. She said yes, and I did her a lovely banner using pictures from a religious CD-ROM, which she thought was great. I said: "Fine, I'll do a deal with you – you get this in return for your coming to the IT class." She came after Christmas, and now Jan has an A5000 with touch screen, a roller ball and colour printer. In fact it is specifically mentioned in the OFSTED report that IT is being used in art.'

Often Elaine has acted as a catalyst; staff have realised the potential for themselves and the children which would never have happened if they had simply been told they had to do it. The school even has a few extra computers for the staff to take home as much as they like so they can learn all the time too.

West Oaks now has an IT policy which all the staff had input into. At the heart of this is the idea that IT should be about enabling. One of the reasons the curriculum is based on the Acorn computer is because they are easily accessible.

Computers as enablers

'Children like to do things that they're good at, so it's important to remove all the barriers that get in the way. Take a program like *Clicker Plus*: I do not think there is anything quite as powerful as this in this sense that it enables those kids to do what they otherwise would not be able to and which they might be very good at.'

'For example, there is one girl who is 15 who is realising she is different because she cannot talk, which makes her frustrated. But using the computer she *can* talk and she can do things other kids can do and it is *real*. She talks and learns real French in her French class. She has digitised speech so she can communicate by letting the computer do the speaking. Can you imagine the excitement this girl had when communicating by speech for the first time?'



West Oaks has a speech and language therapist who uses symbols, so the kids use them on computers too, along with keyboard overlays, touch screens and switch access. All this enables kids with physical difficulties to communicate through writing and drawing.

On to the Net

West Oaks has just had cabling installed for networking. They have already moved fast as they have a connection to the Internet but they eventually want



everyone to have access to it. On the Internet everyone is equal in terms of their communication abilities.

Access to e-mail and the Web does not depend upon a person's physical abilities or disabilities, all it depends upon is having access to a computer, which at West Oaks is now becoming an everyday way of learning. While I was there, West Oaks was putting in a bid to NCET for 16 Risc PCs, which would certainly help.

When I asked Elaine what she saw as the future in Special Needs education she replied: 'If people in a mainstream school could see the things these kids can do they would be amazed. It is purely access, it is enabling, I do not think it is just IT. It is IT with a whole range of extra things which have been planned and had provisions made for them. It is people looking at what children need.

'It does not "just happen", either. It isn't just one person responsible for the good education that is taking place, it's the whole set-up. In the future, special needs education should be exactly where other education should be, following the same curriculum which we are trying to do.'

It's easy to think that what's special about West Oaks school is the pupils, but that would be missing the point. The pupils are normal pupils, getting a normal education, and it's the *school* that's special for allowing this to happen. My parting thought after one of the most enjoyable days I have spent in such a relaxed and well-functioning environment is that that I wish I had gone to a school as good as this. AU

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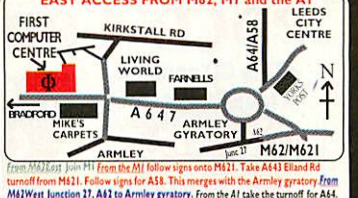
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A touch better

Touch screens never really caught on in schools, largely because there was a distinct lack of software for them. Unless you were prepared to write your own, you were more or less restricted to the demos supplied. Lindis International has just launched *Simple Touch* which overcomes the problem because, as it effectively replaces the mouse, it's compatible with all software. There is even a module for non-RISC compliant software.

Simple Touch fixes to the screen with strips of Velcro. It fits quite nicely over a 14 inch monitor and could even go over a 15 inch. A larger version for 17 inch monitors is also available. The screen comprises a frame with a clear membrane containing a matrix of tiny dots which are almost invisible. This plugs into the serial port.

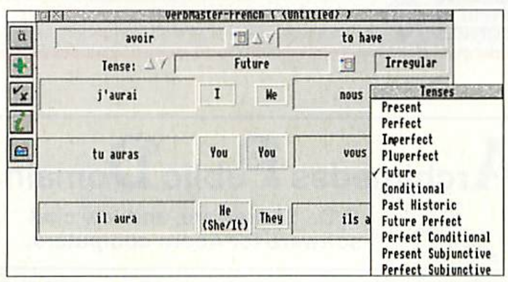
The software, which includes a calibration program with the main driver software, is run in the usual way and your finger then does the work. It's worth spending some time calibrating the screen as this will make it considerably more accurate. Settings can be saved so that when the program is run again, it's already set up – unless you change screen modes in which case you'll need to re-calibrate.

The resolution is actually very good, although I did have some trouble at first with menus, especially when I had to slide my finger up a menu. Drawing (using *Draw*) is also acceptable, although I think I would have to practice a great deal to be as good with the touch screen as I am with a mouse. I do find, though, that prolonged use can cause quite severe arm ache. I can't help feeling that it might be better to sit the monitor on its back so the screen is facing upwards, and work on a horizontal surface.

My only other concern (and this is offered slightly 'tongue-in-cheek'), is that I'm always telling my students to keep their hands off the screens...

The 14 inch *Simple Touch* screen costs £225, whilst the 17 inch version is £340 (both + carriage + VAT), and they are available from Lindis International who can be contacted on (01986) 785476.

Mastering the lingo



I've lost count of the number of times I've said that just because a program is either free or almost free, it shouldn't be dismissed. Never was that more true than of *VerbMaster*.

Nigel Caplan is a sixth form student studying French and German and has developed some software to support his studies. *VerbMaster* is a fully multitasking application available in both French or German, and it has a whole host of features to help would-be French and German speakers of all ages and abilities. The software is supplied with 12 standard tenses for French (which can be added to) and all eight standard German tenses, any of which can be turned off if required. The verb list can be added to and can be printed.

I've seen other verb conjugation programs costing a great deal more, but *VerbMaster* is not out-classed by any of them.

Nigel is now marketing his software as Shareware through APDL (tel: 0181-778 2659) and The Datafile (tel: (01934) 823005). Registration is a paltry £7.50 per language or £12.50 for both.

Rusty Dreamer – the ultimate reading experience!

The announcement, earlier this year, of Mike Matson's decision to leave 4Mation and subsequently join forces with Sherston Software has caused quite a stir within the educational IT community. Mike Matson and Sherston fans will be pleased to hear that the first fruits of this new partnership will be available in September.

Rusty Dreamer is an ambitious project which uses innovative video animation techniques, developed by Mike, which will bring a new dimension to educational multimedia, while providing a valuable reading experience for children aged 9-13. Children will be absorbed in the exciting world of Rusty Dreamer as she bravely struggles to overcome the strange object that invades her life and indeed threatens the world!

Bill Bonham, Sherston's Managing Director, is confident: "I think fans of Sherston and Mike Matson are going to be delighted with *Rusty Dreamer*; we are very excited about what will be our first true multimedia product."

Rusty Dreamer will be available on triple format CD-ROM (Acorn, Apple Macintosh and Windows), and has been produced using Sherston's own authoring system.

The price is £49.95 ex VAT and should be available now. You can contact Sherston Software on (01666) 840433.

Welcome

This month in the education pages, Dave Hall from Markyate JMI School tells us how he uses *Ultima* with his class to produce their own talking stories – another superb example of how IT can be used very effectively in the classroom. A cut-down version of one of the talking stories produced by some of Dave's pupils is on the cover disc.

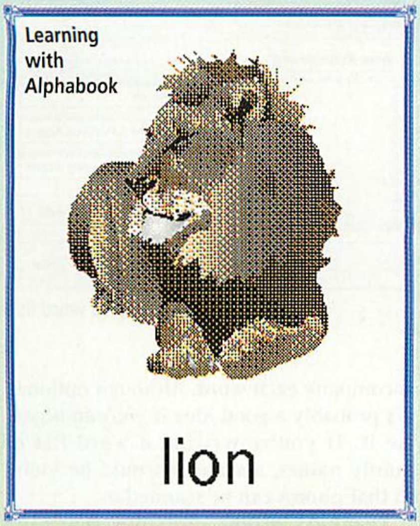
Contacting me

You can contact the Education page by writing to me, Geoff Preston at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: aueduc@idg.co.uk

ACORN USER ADVERTISERS INDEX

In the picture

Colin Rouse is introduced to the world of words and numbers with *Picture Book 2*



***P**icture book 2* is a collection of five individual programs based around the theme of words and numbers, designed to help very young children with reading, spelling and counting.

Alphabet book

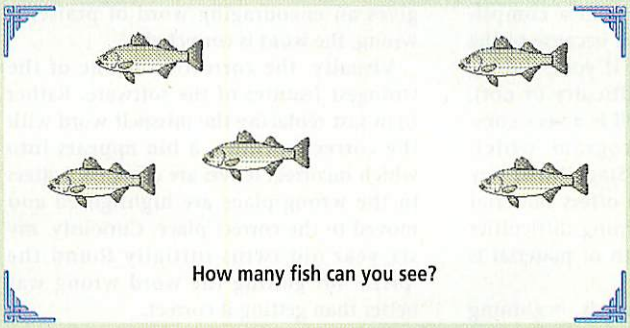
This is an electronic version of the traditional alphabet picture book. All the child has to do is press any key on the keyboard and that letter, complete with its sound and a picture, will be displayed. The bright, colourful pictures and fun sounds are just what you would expect from a program like this.

Older children can begin to read the words displayed out loud and discuss the picture to develop early reading skills. Sounds and words can be repeated as often as required by the child. This program is also configurable so that parents can concentrate on specific letters, should they wish to do so, and use or disregard the various sound options available.

Snap

This is a traditional matching game that the child can either play alone, or with friends. Pairs of pictures, sound effects, words or spoken words are shown and the first player to correctly spot a matching pair and press their key scores a point. If the answer is incorrect, optionally a point is deducted from their score.

Various further options can be used such as the number of players, their names and which key they will use. You can also choose whether matching is between pictures, words, sound effects, spoken words or any combination of these. Also configurable is the length of time the program will wait between displaying the choices, how long to pause after a match has been made, and how often to force a match if none has occurred. A final choice is the ability to display icons that show what pairs are being matched, a countdown timer and the current player scores.



Count 'em

Count 'em is an introduction to the world of numbers. Using pictures from the alphabet file, the child has to press a number key corresponding to how many pictures of a particular object are displayed. The picture to be counted can be indicated in different ways. If the child makes a mistake, they are informed and given another chance. If the child repeatedly makes mistakes then the program moves on to another screen.

Again, there are choices built into the program. The number of objects of a particular type can be specified from two to nine, and other objects can be included to add a degree of difficulty. The number of mistakes a child can make can also be determined.

Spell it

Spell it is a three level program which introduces words. At the first level, any correct letters the child enters will be placed in the correct position to build a word. On the second level, the letters must be entered in the correct order, whilst at the hardest level any letters will be accepted and displayed.

At the first level, children can again experiment by pressing keys. The game level and the number of guesses, the time delay between each word, the sound effects used and a loop option so that words may be repeated are all fully configurable.

Flashcard

This program reinforces the recognition and spelling of words in the alphabet files. Each word is displayed in turn and the child should say the word. After a few moments the word is complemented by a picture appearing in the bottom left-hand corner. Again there are configuration choices. There is also a selection of shared choices which will configure all the programs at the same time.

Conclusion

As a suite of programs for the pre-school and reception child, I feel *Picture Book 2* should be used for short periods of time with much repetition, in much the same way that toys which do the same things are used, because children may soon get tired of using it. The idea of using separate alphabet files is good but more are needed. All in all, though, this is a useful set of programs to help with pre-reading and number skills and as an aid to keyboard familiarity. AU

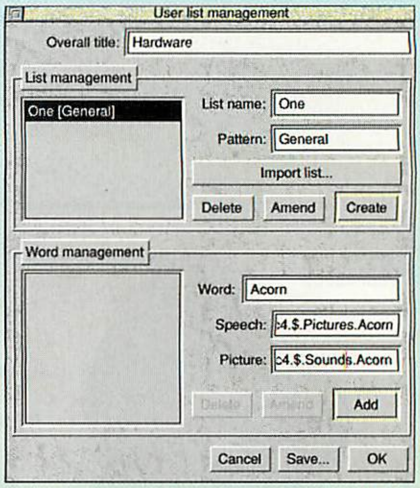
Product details

Product: Picture Book 2
Supplier: The Really Good Software Company
Address: 39, Carisbrooke Road, Harpenden, Herts AL5 5QS
Tel: (01582) 761395
Fax: (01582) 761395
E-mail: rgsc@turnbull.compulink.co.uk
Price: £35

Pros: Good artwork • Simple to use

Cons: More alphabet files needed

Gold stars for **spelling**

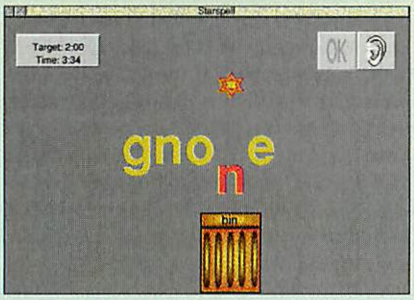


Create customised word lists

Geoff Preston looks at a program to help with your spelling

Learning to spell can seem a complicated and daunting task because of the variety of skills involved. If your child is learning to spell (with difficulty or not), *Starspell* will help. *Starspell* is a very comprehensive spelling program which provides material for Key Stage 1 and Key Stage 2 learners, but also offers material for those with special learning difficulties such as dyslexia. The depth of material is also impressive.

There are nine sets of words, beginning with Early Practice which is for the very young. The exercises in this section offer the user the chance to learn some of the basic single-syllable nouns and verbs beginning with each letter of the alphabet. *Starspell* covers all the main spelling patterns in the English language as well as types of words commonly misspelt.



A clear display, with a good use of graphics

These include changes before endings (e.g. doubling a consonant and adding 'ing', as in swimming), and letter sounds altered by other letters (e.g. circus) and silent letters (e.g. know). Each of the sections are sub-divided and some are divided still further.

Choosing the exact exercise in this way is probably the dullest part of the program and could do with something to liven it up, although this part of the program is really for the teacher.

Starspell activities are based on the well-tried 'look-cover-write-check' approach. When a word is given to a pupil, it is displayed in clear letters, spoken in a clear voice from digitised sounds and, in most cases, a picture is provided. The word is displayed for a few seconds before it is removed and the pupil then has to enter the word. If it's correct a voice gives an encouraging word of praise, if wrong, the word is corrected.

Visually, the correction is one of the strongest features of the software. Rather than just replacing the misspelt word with the correct spelling, a bin appears into which incorrect letters are dropped. Letters in the wrong place are highlighted and moved to the correct place. Curiously, my six-year old twins initially found the 'prize' for getting the word wrong was better than getting it correct.

Speaking Starspell

The latest development of this software is the speaking version which comes on a CD-ROM. Apart from the addition of the voice, it is identical to the non-speaking version. *Speaking Starspell* contains over 2500 words, most of which are illustrated and all of which are spoken in a very clear voice. Double-clicking on the *Install* icon prompts the user to drag the application onto a hard disc. The program is then loaded from the hard disc and the CD-ROM is accessed only by the computer when required.

Speaking Starspell is supplied with two manuals. The first is a technical guide to using the program on an Acorn computer. It takes the user through the installation process and outlines some of the features of the software, including how to customise the learning strategies. The second manual is a 52-page, A5 handbook which describes the ways in which *Starspell* can be used to teach spelling and includes all the word lists.

Customising Starspell

In addition to the lists already provided, custom lists can also be generated which could include family names, road names or whatever you like. The customising dialogue is found in the application menu and lists created are saved into the application on the hard disc. In order to do this you really need to provide a picture to accompany each word. Although optional, it's probably a good idea if you can organise it. If you're writing a word list of family names, a scanner would be useful so that photos can be scanned in.

Teachers might consider scanning photos of each of the pupils in the form so the youngsters will be able to learn each other's name. If using *Speaking Starspell*, a good voice recorder is essential to get a good quality recording to go with each word.

Conclusion

This program is not a game. It has been very carefully investigated and has been developed by experts. Its use follows well documented educational strategies, and the word lists offer a comprehensive and ordered approach to spelling the English language.

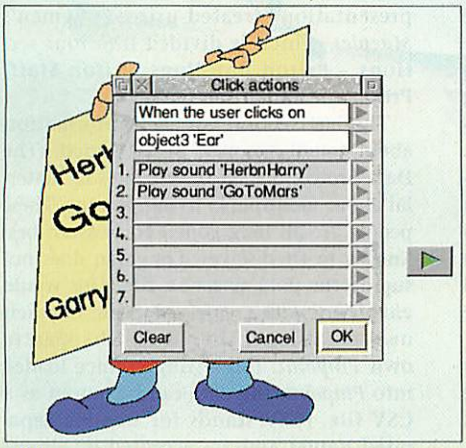
Far from being a gimmick, the addition of voice is well worth the extra cost because it significantly enhances the accessibility of the software. If you've got access to a CD-ROM drive at home, this program is highly recommended. If you haven't, go for the non-speaking version. AU

Product details

Product: Starspell & Speaking Starspell
Supplier: Fisher-Marriott Software
Address: 3, Grove Road, Ansty, Coventry CV7 9JD
Tel: (01203) 616325
Fax: (01203) 616325
Price: *Starspell* costs £32.31 inc VAT. *Speaking Starspell* costs £49.94 inc VAT for a single copy. Additional CD-ROM discs are available for £19.97 inc VAT. A network licence costs double the single user price.
Pros: Based on sound practice • Can be customised to suit teacher and/or student • Clear audio
Cons: Exercise selection is a little drab • Handbook is a rather unfriendly for home use • Better rewards for correct answers

Creative writing

Primary school teacher David Hall explains how he and his pupils create talking books for the younger children in the school



Adding actions to buttons is simplicity itself with *Ultima*

Ever since Sherston first produced *Naughty Stories*, many teachers have been dying to have the software to be able to produce their own. Even better would be a simple program that would allow reluctant writers to produce their own talking stories for other children to read.

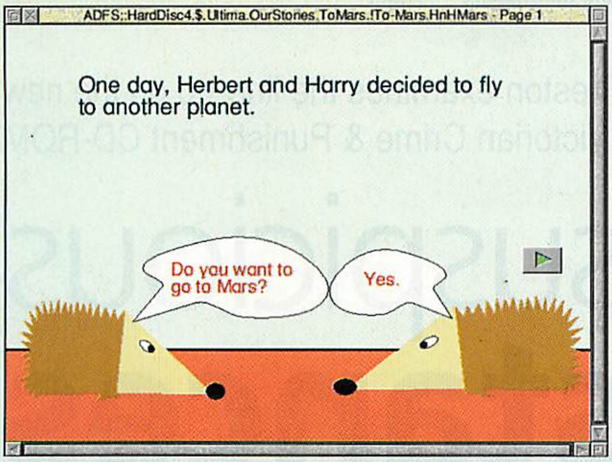
When I first read about *Ultima*, I immediately thought that here was an affordable piece of software that could enable us to do just that. Having read reviews and sample files in *Ultima* format, I decided this was for me. My cheque was in the post the same day.

Since the program arrived in October, it has been used extensively with my class of Year 5 and 6 children with whom we had already begun to write stories for infants. This is an activity that I repeat for most years because it gives a purpose for the children in that they are writing for a specific audience.

I decided there was not enough time in the existing timetable to allow me to do the extra computer work during school time, so I began an extra-curricular activity after school which we call SECA – Special Extra-Curricula Activity.) I had about 18 of my class who were interested and, as we have six A3000 or A4000 machines, it meant there were fairly small groups at each machine.

Much of the work involved in producing *Ultima* presentations was carried out away from the computers. The stories had all been written and made into little books. They had been read to groups of young children in the Nursery department as well as in Reception and Year 1. The main task now was to draw the pictures and then transfer the stories to the computer.

As most of the children had had little or no experience in using *Draw*, it seemed more sensible to use the Scanlight 256 hand scanner to scan their own pictures which we loaded into *Draw*, and then use these to 'trace' a new coloured version. This needed a few lessons and demonstrations in how to go over the existing lines and use the 'fill' option, but the children were very quickly able to do the work themselves and some became quite expert. They also learned how to import these pictures into their *Ultima* picture library and link one completed page to the next. Most of the text was typed in directly onto the *Ultima* pages.



The adventures of Herbert and Harry. Devised, written, produced and drawn by Year 5 and 6 pupils

The next task was to add the sound. We have an *Oak Recorder* and were able to use this for speech and sound effects. *Ultima* is able to 'read' words and highlights them as it does so, but this produces rather laboured speech and we found it more satisfactory to record short phrases or sound effects and stack them in order for use. This is simply a matter of dragging each sound sample into the action window and *Ultima* will read them in order.

The stories use a great deal of memory and if saved as a single file will not run on a two megabyte computer. Much of the problem is in the sound. Each second uses around 10K of memory. Some simple animations were included and these also use a good deal of memory. Most of the stories that we have produced are well over 600K, so these were saved as linked files.

Using a Vision 24 colour digitiser, we were able to include portraits of the authors in the finished presentations. This added to the 'value' of the story and produced big grins! We have completed about a dozen stories for infants and are becoming really ambitious. We are now producing branching adventures which include conditional actions, and these will also be shared with other children in school.

The next logical step is to be able to share our efforts with others around the country. This is where 'Swap Shop' comes in. The Swap Shop is run by Paul Hooper who acts as a librarian for any multimedia presentations in *Genesis*, *Magpie* and *Ultima* format. They can all produce 'stand-alone' applications which can be freely distributed and, Paul collects contributions and returns swaps to the sender. Paul can be contacted at 11 Rochford Road, Martham, Great Yarmouth NR29 4RL. AU

Product details

Product: Ultima
Supplier: SEMERC, 1 Broadbent Road, Watersheddings, Oldham OL1 4HU
Tel: 0161-627 4469
Fax: 0161-627 2381
Price: £49 + VAT

In suspicious circumstances

Geoff Preston examines the line-up on the new Victorian Crime & Punishment CD-ROM

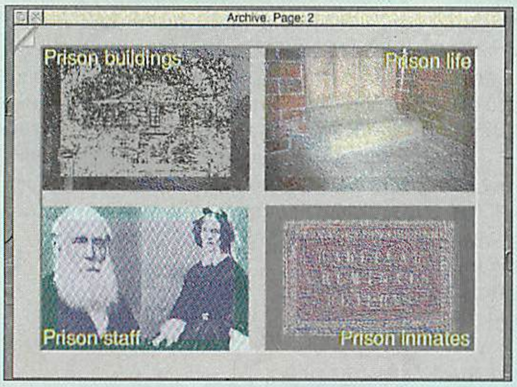
Product details

Product: Victorian Crime & Punishment
Supplier: Longman Logotron
Address: 124 Cambridge Science Park, Milton Road, Cambridge, CB4 4ZS
Tel: (01223) 425558
Fax: (01223) 425349
Price: £41 for a single user copy

The Key Stage 3 History syllabus includes a study of a particularly interesting period of our history – the Victorian age. There are several very good programs available which focus on a whole range of topics of that period. The latest offering from Longman Logotron is *Victorian Crime & Punishment*, which contains so much information it's put it on a CD-ROM, and then supplied a floppy disc with more data on it.

Budgets being what they are, many teachers have to purchase non subject-specific software and create their own subject-based resources around it. For those lucky enough to have slightly larger budgets, they can purchase subject-specific software. This pack is the outcome of a project to develop data handling in primary schools, and *VC&P* represents the fruits of work carried out by teachers and pupils at two schools in Cambridgeshire.

Additional help and support was enlisted from officers of the Cambridgeshire Constabulary. The project is based on the 378 personalities featured in the Huntingdon County Gaol 'Habitual Criminal' registers for the 1870s. These were transferred into *Junior Pinpoint* and the project was built up around that datafile. It just goes to show what can be done if you put your mind to it.



Much of the datafile is included in a stand-alone multimedia presentation

The pack includes an A4 book with the CD-ROM in a clear wallet glued onto the inside front cover and an Habitual Criminals Register in a shrink-wrapped cover. The book includes numerous photocopiable worksheets and teachers' notes about the use of the software, as well as background information about the law in Victorian times. The worksheet and several of the background information pages are on the CD as *Drawfiles*.

Also included in the book are a number of exercises or activities which involve mainly searching and sorting the datafiles and producing graphs from the results. Activities for younger children include describing individuals from the data given, while those for the older students encourage them to hypothesise about information in the datafile and provide them with a structure within which they can use their data handling skills to prove or disprove theories.

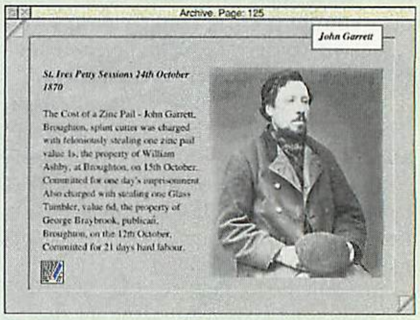
Each activity has a worksheet and they have been designed so that each child or group of children should spend no more than 30 minutes working on it. This means that at least two groups of children per computer should be able to complete the task in a lesson.

My only complaint with this material is a minor one, but something I would like to see changed fairly quickly. Throughout the book, activities are divided into Stage 1, Stage 2 and Stage 3. These have nothing whatsoever to do with Key Stage 1, Key Stage 2 or Key Stage 3 and would be better referred to as 'step' or 'part'.

The pack says that it's for use with Longman's data handling programs *Pinpoint* and *Junior Pinpoint* (versions 1 and 2), if you don't have this software you won't be able to do much searching and sorting. However, you will still find a great deal of useful material here because the main part of the software is a stand-alone multimedia presentation (created using Longman's *Magpie*), which is divided into four sections – Prison Buildings, Prison Staff, Prison Life and Prison Inmates.

The last section contains information about actual prisoners of the period. (The Data Protection Act only relates to material about identifiable living persons. These people are all long gone.) For reasons best known to themselves, Longman does not supply the data as a CSV file. This would enable users to create a datafile for their own database if they didn't happen to own *Pinpoint*. Interestingly, once loaded into *Pinpoint*, the data can be output as a CSV file. (CSV stands for Comma Separated Values and are accepted by almost all spreadsheets and database programs.)

From the History standpoint, this software addresses many National Curriculum attainment targets and can be used as a 'lead in' to other associated topics which address even more. On the Information Technology side, the attainment targets are related mainly to data handling, although work could be developed to encompass some other areas, notably modelling.



Searches can locate all manner of colourful characters

Victorian Crime & Punishment gives the user a real insight into what life must have been like for everyone on both sides of the law. It contains a wealth of information about the Victorian way of life and the consequences of any misdemeanours. Children will be fascinated by this topic. AU

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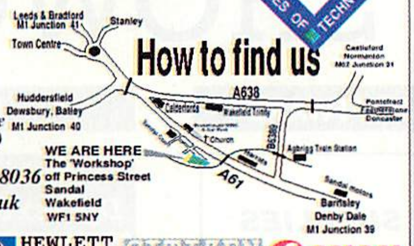
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GAME SHOW

Marsquake

Steve Mumford reports on the progress of a new game and helps out with some cheats

You may remember that, a month or so ago, I mentioned a game named *Marsquake*. Billed as the unofficial sequel to *Moonquake*, it promises to be the definitive *Bomberman* clone, and Paul Taylor, its creator, is packing in as many innovative features as he can think of. Here's Paul's account of *Marsquake*'s development to date – we'll be following its progress over the next few issues until it's ready to be released.

The birth of Marsquake

Although it has been a couple of months since I first sat down with the aim of writing *Marsquake*, the game is still in the early stages of development. Here's the story so far:

The first thing I did was design the data structures that would hold all the vital information in the game, such as the player's location, their suit colour and the number of lives and bombs they hold.

Marsquake has two major differences when compared to *Moonquake*. Firstly, the game arena is much larger than the area that can be displayed on one screen, so it's got to be able to scroll around as the player moves. Secondly, bombs are now separate objects that can be moved around the game arena – in *Moonquake*, they were just another type of floor tile that generated an explosion after a certain period of time.

Once the initial data structures and some simple graphics were ready, the coding could begin. I'm using a mixture of C and ARM assembly language, though most of the program is being turned out in ARM code. I've also cobbled together some little BASIC programs to extract raw graphics data from sprite files for the objects needed within the game. The scrolling game arena came together fairly quickly, and the only major glitch here came as a bit of a shock to me. Acorn's machines are *little-endian* (ie when storing a 32-bit number as four bytes, the least significant byte is stored first in the memory).

It seems I've spent too long working on a 3DO system – it also uses an ARM processor, but it's running in big-endian mode, placing the most significant byte first.

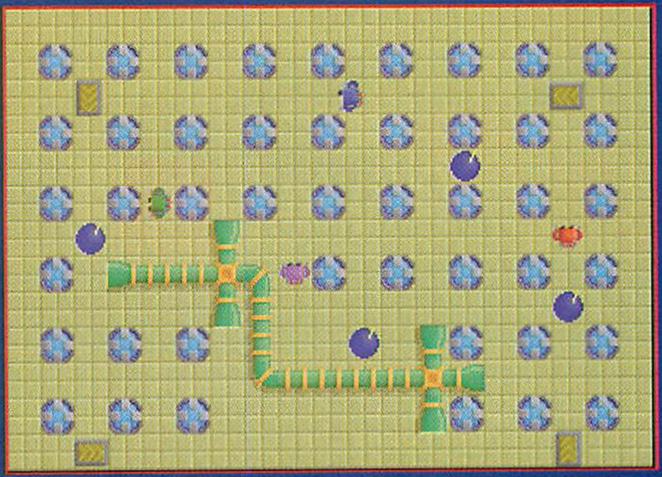
As a result, it seemed to me that all those values I was placing into memory were coming out backwards!

The map has a border one tile wide that runs round its perimeter. I've filled this area with a type of tile that cannot be destroyed or walked over, just like the wall tiles that make up the permanent grid formation in a standard game arena. As the players are prevented from moving onto this type of tile, it saves me range-checking their positions to prevent them from leaving the game arena.

The player is free to move over any tile that isn't described as 'blocking', such as normal floor and conveyor belts, but he or she can't walk over pipe networks, walls or rubble. Matching the player's position to a particular tile on the map, or rather *failing* to do so, was the cause of much panic – the player missed the edge of the game arena and promptly walked off into the unknown. The screen attempted to follow him, but ended up trying to decode garbage as map data and – well, it wasn't too healthy. Who decided to put the reset button round the back of the Risc PC, anyway?

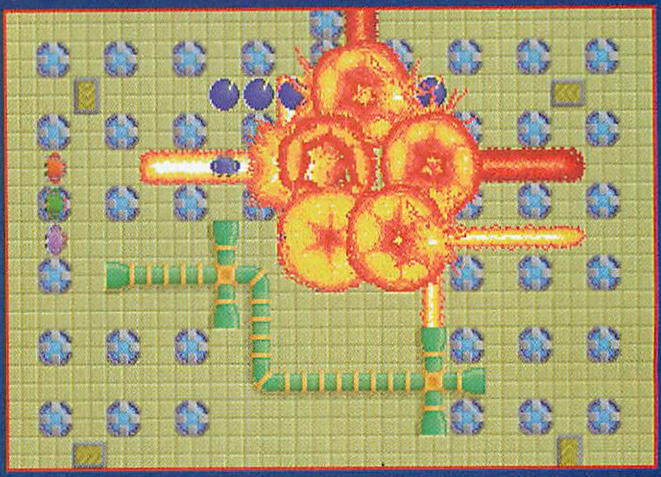
Sentient incendiaries

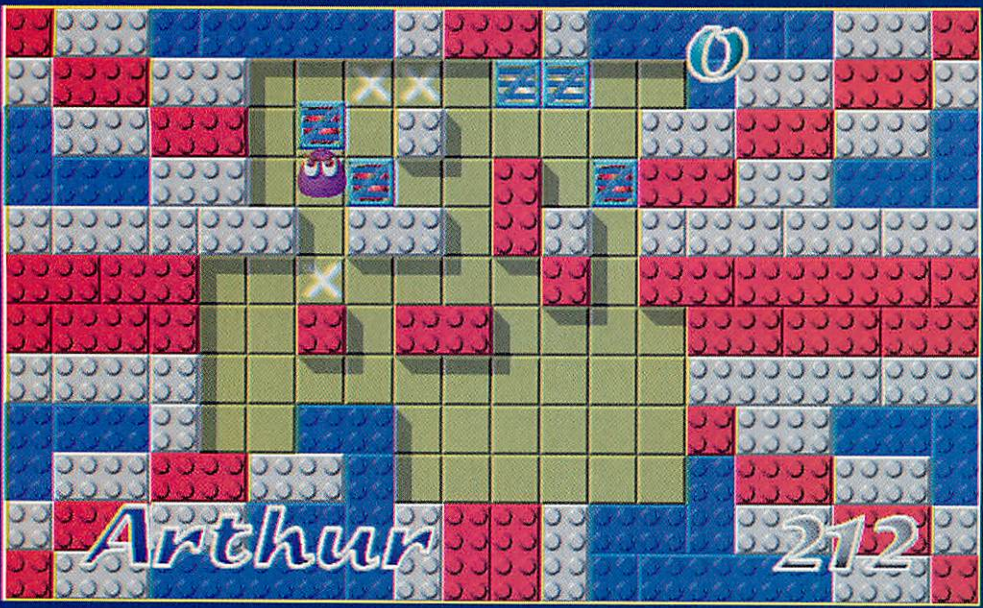
Once a maximum of four players were happily wandering around the arena, the dropping of bombs was the next logical step. Up to 64 bombs can exist at any one time, and every time the fire button is pressed when the player is over an empty tile, another bomb object is generated – as long as they have another bomb to drop! The bomb knows what type it is and who dropped it, as well as where it is and whether it's on the move. To facilitate collision detection between bombs, players and baddies, the map also knows the bomb's location.



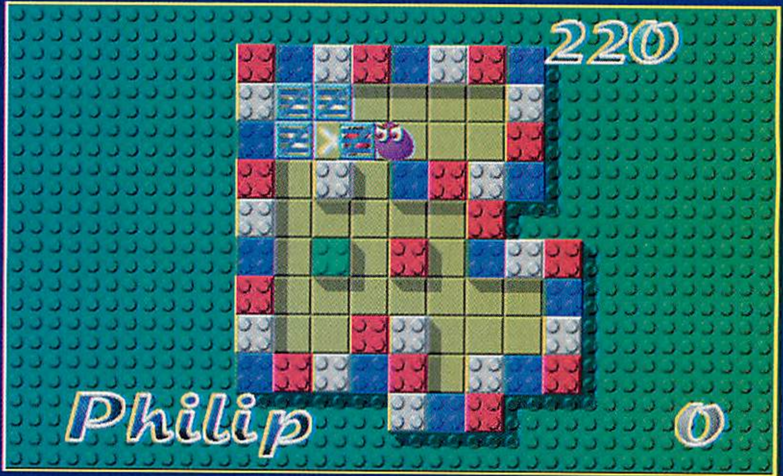
Maintaining the position of the bombs in the map data was – dare I say it – something of a mine-field. Before this was debugged, there were bombs that were there that you could walk over, and bombs that weren't there that you couldn't. On top of all this I had the problem with the arena boundary again. Bombs were sliding off into the nether regions of the computer, scribbling all over the rest of the memory, including the program itself.

While I was working on the bomb movement, I added a





check for a conveyor-belt tile, which changed the direction of the bomb to that of the conveyor. When the timer reached zero, the bombs disappeared with a beep, but once I was happy with the bomb movement, I added the basic cross-shape explosion. When the bomb detonates, it locks to the centre of the nearest tile before extending outwards, altering the map data to indicate the first frame of an explosion. The flames extend until they reach the prescribed length or they meet an impassable



tile. If they happen to encounter another bomb, it's timer is reduced to a value just above zero to create the chain reactions – I'll reveal more next month.

Don't push me

Although *PushyII* made an appearance in the *Acorn User* Public Domain pages last month, it's so good I reckon it deserves another mention. Written by Fred Williams, it's a great implementation of the oft-converted block-moving puzzle game, but the extra objects and challenging levels give it a much longer lifespan than the original *Pushy*. Add to that the fact that it's free, and you have a game that's an essential addition to the collection of anyone who enjoys a bit of brain-teasing arcade action. Download it from http://www.argonet.co.uk/users/rfredw/ at once!

And finally

Apologies to Software 7, developer of the forthcoming game *King and Country* – the company's e-mail address was misprinted in the July issue. It should have read: software7@digibank.demon. co.uk No more news on the game's progress as yet, but I'll let you know as soon as I find out.

I've just got time to mention that another interactive fiction programming system has made its way to the Acorn.

We'll have more information for you soon, but if you want to take a look for yourself, try looking at ftp.gmd.de in the */if-archive/programming/HUGO* directory.

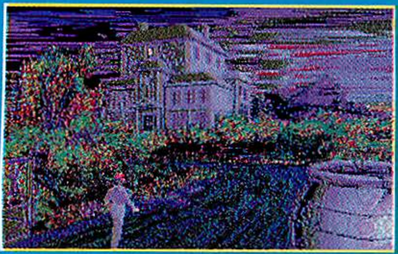
That's all for now, but next month we'll have the next instalment of Paul Taylor's *Marsquake* game diary, as well as more gaming advice and information. See you then.

Cheat corner

I've received a request from S K Street in Dunstable for a cheat relating to *Xenon II*. Although I don't know of any built-in cheats offhand, there's a *Desktop Hacker* cheat module that provides some desirable features. With any luck, there'll be enough space on the cover disc to squeeze it on, along with cheat modules for *Alone in the Dark* and *Burn Out*.

They're all fairly self-explanatory – the only thing to note when using the *Alone in the Dark* module is that you should be careful when using the hotkey combination that refills your lamp. Performing this cheat at the wrong time appears to confuse the computer, and it can be hard to light the lamp again afterwards. However, the health and ammunition cheats work fine, and a revolver loaded to the gills with ammunition can be a great source of reassurance in those dismal, foreboding corridors.

Whilst we're on the subject of *Alone in the Dark*, John Dennis has reached a sticking point in the game, and has written in for advice. He's not been able to trigger the mechanism hidden on the shield in the study, he can't get out of the front door or past the worm in the cellar, and he doesn't know what to do with the large key that he found in the room with the Dancers. Happily, all of these problems can be solved easily.

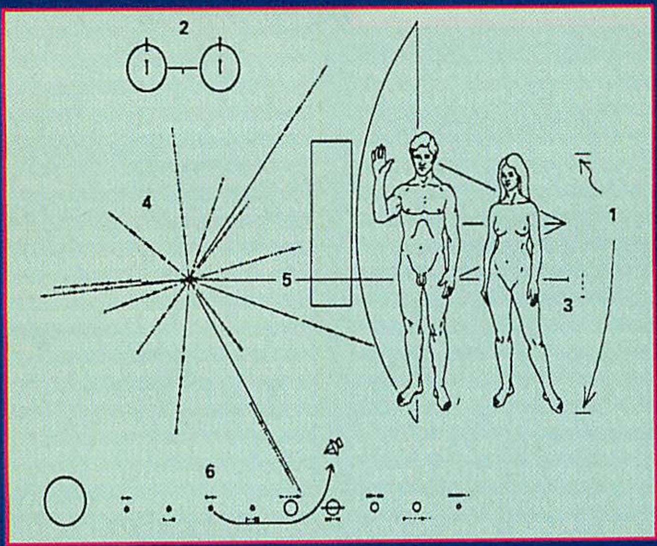


Getting out of the front door is the aim of the game, but you can't do that until you've vanquished the evil that's inhabiting Decerto. To get into the passageways beyond the cellar and find the lock that matches the large key, you need to take the antique sabre found in one of the chests early in the game and place it on the shield. Lo and behold, a passageway will open up and you'll be able to descend into the labyrinthine nightmare below. Be warned – the challenges you'll face there make everything you've experienced so far look like a light lunch.

Colourless green ideas sleep furiously

Graham Nelson on the trickiest input/output protocol

If alien visitors arrive, what are we going to say, and how? Unless they've been watching our TV for decades, and expect to be met on the White House lawn by the cast of Neighbours, there'll be no point of contact. Do we gesture? But sign language varies in meaning, even among isolated human communities in South America and New Zealand. Do we sketch pictures? But humans reconstruct ideas from a few lines on paper in a very complicated way, and maybe aliens don't.



Note the 70s hair, and that he does all the waving (NASA/JPL)

NASA has already thought about this, and there are engraved plaques and tape recordings on the four space probes which have left our solar system forever, one of which will approach another star in about 40,000 years. We are sending Them speeches by the President of the United States, Richard Nixon, and the Secretary-General of the UN, Kurt Waldheim, which seemed like a good idea in 1973. But also jazz trumpet and the sound of a baby crying?

It's hard to see how They could possibly understand us, beyond the message 'we exist'. Spoken language is terribly complex. We have no clear idea how children learn it, or how the human race invented it, or how long ago.

The only thing these aliens understand...

The first arcade game which made it into pubs, *Space Invaders*, didn't trouble itself with embassies and ambassadors. The aim is to shoot the aliens as fast as possible before they can land, and they reply with bombs. This is an all too human form of communication, so take a look inside the console instead. How is the computer, our nearest shot at an alien species, making itself known?

Arcade games are wildly unbalanced between input and output. Input is about looking at voltage levels on a few wires: the joystick sensors, the fire-button circuit. Although the player can demand complicated movements, steering her character through a maze for instance, it's the player who does the hard work of reducing her strategy to simple signals. The console has it easy.

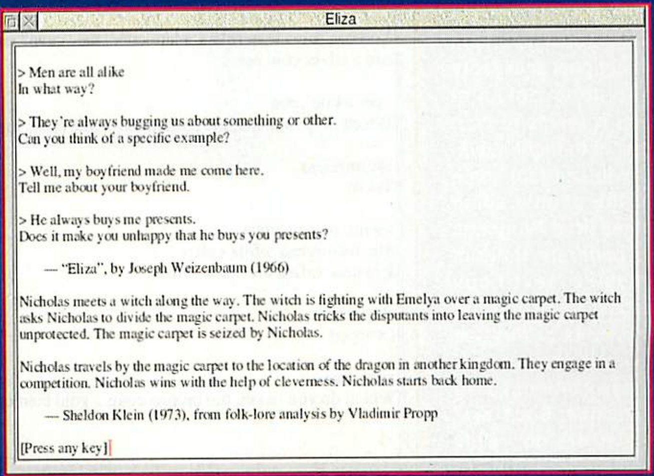
But output is a nightmare of calculation for the computer, which talks about the world by throwing images and sounds at the player at a furious pace. To look at *Zarch*, *Orion*, or *Silkworm IV* in the heat of action is to be tolerably impressed. But it's really ourselves who deserve to be congratulated for managing to reconstruct a 3D picture of a world in real time, given only glimpses at a crude un-life-like projection.

A computer deserves to be judged more kindly – any programmer will say. If the household dog suddenly says something, never mind if it's not philosophy, it's still a miracle.

Dogs and mad Englishmen

People argue about whether or not dogs can think, but they're way ahead of any computer program we could write today to control a robot dog. Yet 30 years ago the dream was that once technology had moved on, we could simply dictate to computers like disembodied people, just as in *Star Trek* (1966-8). What happened?

The technology has moved on all right. A Risc PC can perform calculations in a split second which Mr Spock would have allowed a week for, given the USS Enterprise's computer. But the best it has in the way of natural language is a module like *Speech!*, translating text into


Eliza

> Men are all alike
In what way?

> They're always bugging us about something or other.
Can you think of a specific example?

> Well, my boyfriend made me come here.
Tell me about your boyfriend.

> He always buys me presents.
Does it make you unhappy that he buys you presents?

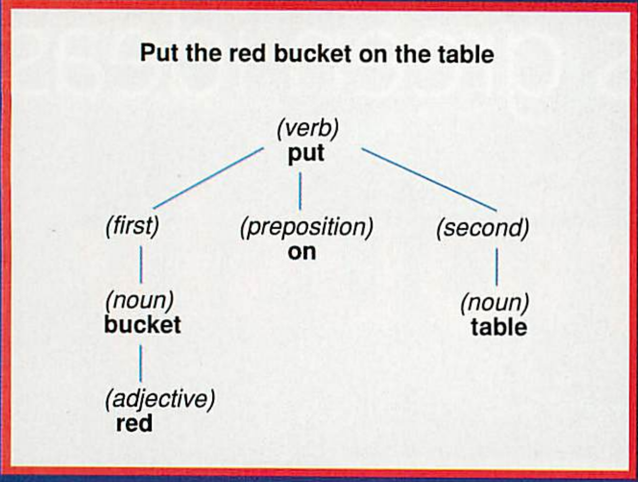
— "Eliza", by Joseph Weizenbaum (1966)

Nicholas meets a witch along the way. The witch is fighting with Emelya over a magic carpet. The witch asks Nicholas to divide the magic carpet. Nicholas tricks the disputants into leaving the magic carpet unprotected. The magic carpet is seized by Nicholas.

Nicholas travels by the magic carpet to the location of the dragon in another kingdom. They engage in a competition. Nicholas wins with the help of cleverness. Nicholas starts back home.

— Sheldon Klein (1973), from folk-lore analysis by Vladimir Propp

[Press any key]



phonemes and then trying to voice them through the loudspeaker.

Instead of a microphone, the '80s gave us the RISC OS desktop, images pointing to what we want, as if we were on holiday in Acornland without a phrase book. It's precise and direct, compared with having to say something like 'the folder on the left, no, the next one...'. It also keeps the work-place quiet, which is probably where Xerox's idea of 'earcons' (like icons, but using the ears – geddit?) went wrong. Still, like most WYSIWYG systems, it is really WYSIAYG: what you see is all you get. When a dialogue box pops up with a dozen check-boxes, you can't ask for another one instead, and let the computer use its native reasoning to work out how to cope.

What happened is that natural language recognition and artificial intelligence turned out to be far harder than feared, and are still beyond our horizon. The idea that the ability to speak is a kind of optional accessory has gone out, and now it seems to be a part of thought itself.

You can fool some of the people some of the time. Programs to generate random physics text-book pages, short murder mysteries or Russian folk tales have sometimes convinced an audience. Such programs are not really communicating, in that they don't have to answer questions – which is just as well.

The celebrated *Eliza* though, pretended to be a 'non-directive' psychiatrist, that is, one trained to make no concrete suggestion – see the sample dialogue. *Eliza* was only substituting words into standard patterns, but it fooled many people and has genuinely been used for therapy. It has also been connected up to another program, called *Parry*, pretending to be a paranoid schizophrenic, but the result was disappointingly dull. It takes a human mind to keep adding interest to the dialogue.

Adventure games and natural language

Eliza and *Parry* say some pretty offbeat things, but get away with it because we expect that from psychiatrists and madmen. Adventure games also have limited patterns of speech, which helps to make them manageably small as programs. They describe the world as here and now, constantly placing 'you' in it as if you were blind and it was your companion. In return, you type simple commands.

The process of understanding them is called 'parsing', and often accounts for a good half of the program. The aim is to translate a line of text like 'put the red bucket on the table' into a grammatical structure – take a look at the tree diagram. Some parsers do this 'top down' – that is, they look for the verb and preposition first and then mop up any remaining words, building the tree downwards.

Others, like the Inform parser, are 'bottom up', attempting to work through the words in left-to-right order and building a tree upwards. Whichever approach is taken, there are real problems with ambiguous commands. 'pot the pot plant in the plant pot' is not too hard, because even though 'pot' is used to mean three different things (verb, adjective, noun), the idea is clear. But what does 'put the toad in the hole in the wall' mean, if there happens to be a plate of toad-in-the-hole nearby?

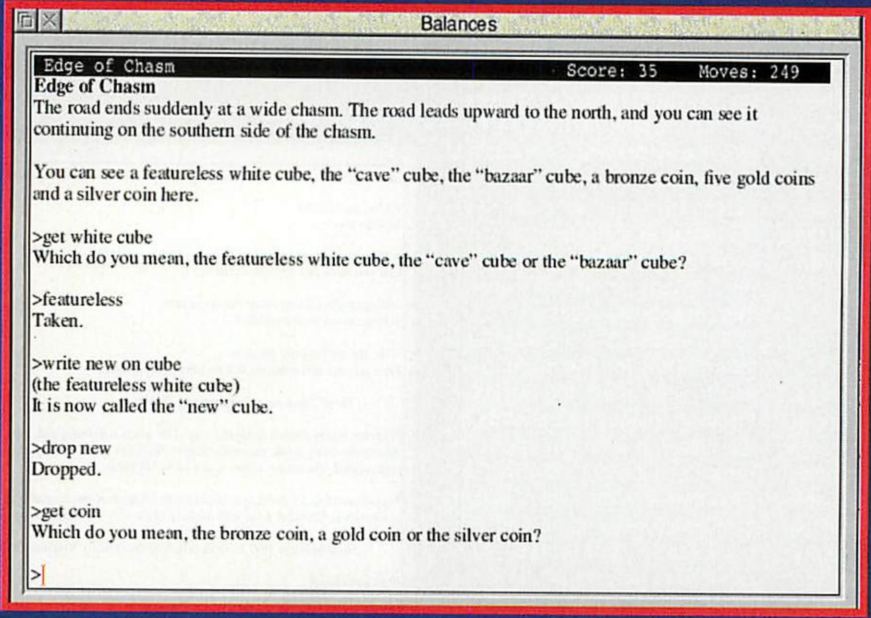
The difficulties mount up when languages other than English are tried. The Inform parser has been translated into Italian, Dutch, German, French and Spanish, but each of these languages has a different word-order from English. German has compound nouns to break up; and in Spanish, the familiar adventure command 'take it' is just one word – 'cog*elo*' or 'cogela' – according to the gender of what's being referred to.

Once the parser has grown a tree, it first has to check that the top of the tree is a familiar pattern. In this case, 'put... on...' is a form of command the parser expects, so there is no problem. Next it has to work out what is being referred to by each noun. At this point, if not before, the parser has to know the state of the game. 'bucket' may mean something different in one place to another. Likewise, there is a great art to not revealing information that the player does not deserve. For example, if the player types 'take diamond' in the opening location, it's important not to say 'You can't see the gleaming diamond ring here'.

This description makes recognising language sound quite easy, but only because adventure games are an easy special case. Not only is the full sweep of English much more ambiguous, relying continuously on the listener knowing or guessing something about the speaker, but it's much harder to relate text to a model of the world.

'Colourless green ideas sleep furiously', said the American theorist Noam Chomsky. Perfect and unambiguous grammar in which not a single word makes sense, because the other words contradict it. How could we explain to an alien that sleeping cannot be done furiously, or that ideas cannot be green? I suspect that natural language is packed full of assumptions about what it means to be human.

And for the time being, we will have to point and click on our computers, shoot at *Space Invaders* and wave to any passing aliens.


Balances

Edge of Chasm Score: 35 Moves: 249

Edge of Chasm

The road ends suddenly at a wide chasm. The road leads upward to the north, and you can see it continuing on the southern side of the chasm.

You can see a featureless white cube, the "cave" cube, the "bazaar" cube, a bronze coin, five gold coins and a silver coin here.

>get white cube
Which do you mean, the featureless white cube, the "cave" cube or the "bazaar" cube?

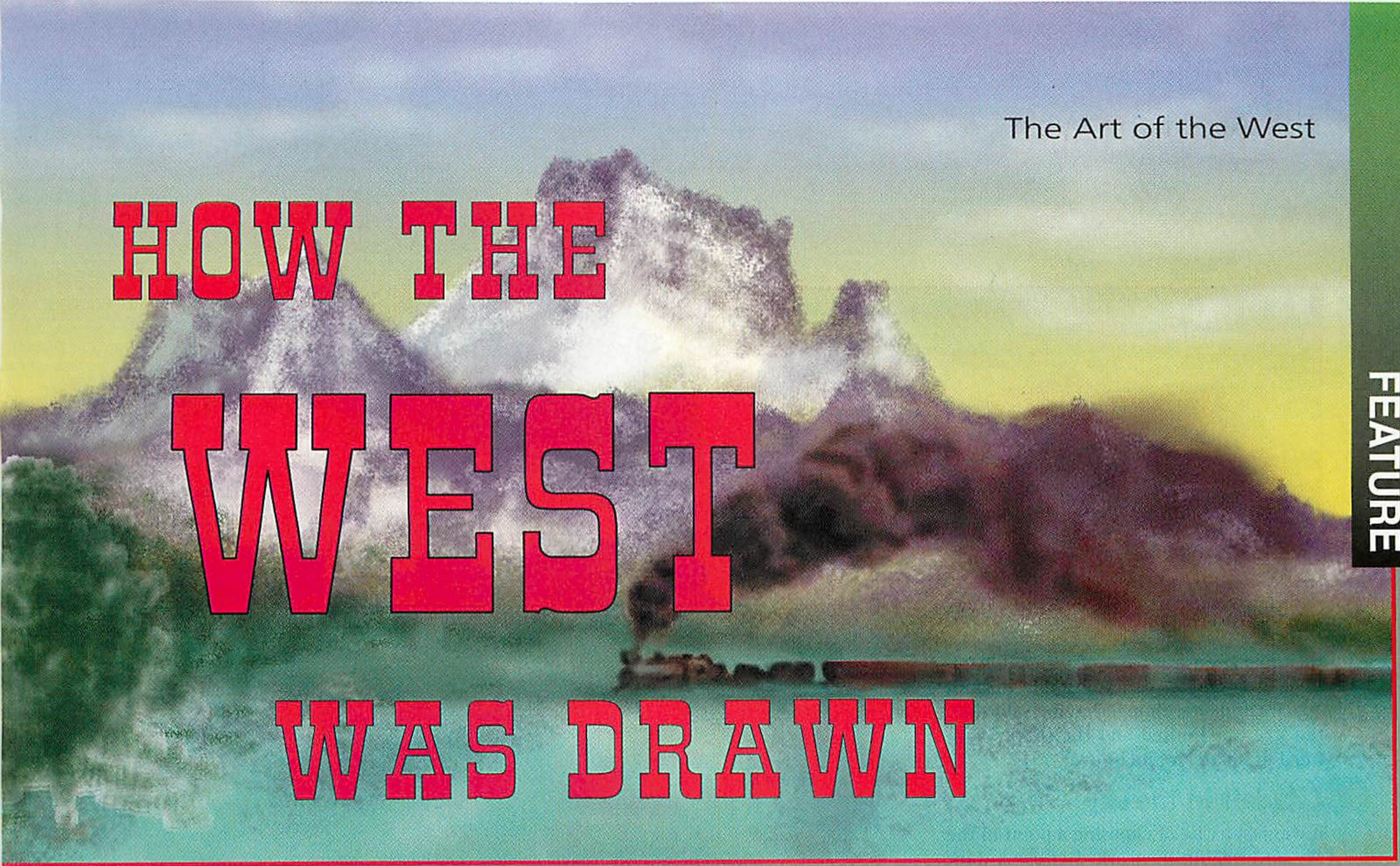
>featureless
Taken.

>write new on cube
(the featureless white cube)
It is now called the "new" cube.

>drop new
Dropped.

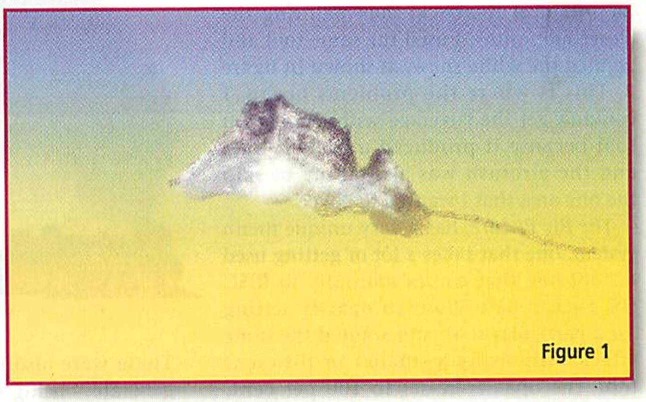
>get coin
Which do you mean, the bronze coin, a gold coin or the silver coin?

>



HOW THE WEST WAS DRAWN

Definitely the last in the series looking at 24-bit painting packages, Walter Briggs gallops across the plains with The Big Picture


Figure 1

In this series of articles I have been creating, from scratch, pictures using my favourite tools: the airbrush, the smudge and, hopefully, the clone.

I have just about stayed in the Wild West for this article. The idea was to create an illustration of the 'Great Plains' – with a backdrop of the majestic 'Rockies' and the atmospheric 'Iron Horse' and hopefully a portrait of the 'flesh and blood' version.

Like other 24-bit packages, *The Big Picture* claims to be a comprehensive and powerfully equipped piece of software that will enable the creation of professional quality images. With the various packages viewed so far it would be possible to create high quality illustrations, but the time element would make using some of them a little prohibitive.

For me the airbrush, one of the main tools I used in the comparison of the individual packages, was quite inadequate. The speed of the tool was so slow that it produced a series of blobs rather than smooth colour – even at the slowest movement the problem persisted. The criteria for the comparison of the various compositions was to see how easy it was to produce a high quality picture using similar tools.

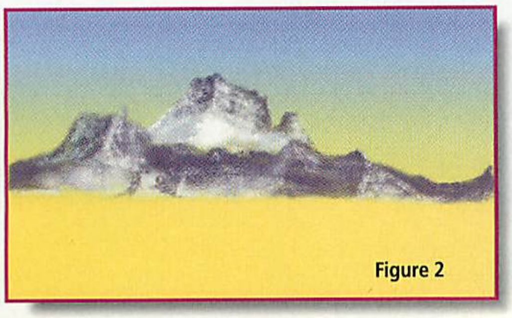
All I was trying to do was compare the 'painting' aspects of the programs – so I would be using only a few basic painting tools, and ones that I feel are necessary for professional imagery. Of course, these illustrations, and the views expressed, are only my own personal opinions, and in comparison to the manufacturers' claims. With this in mind I began the Iron Horse composition.

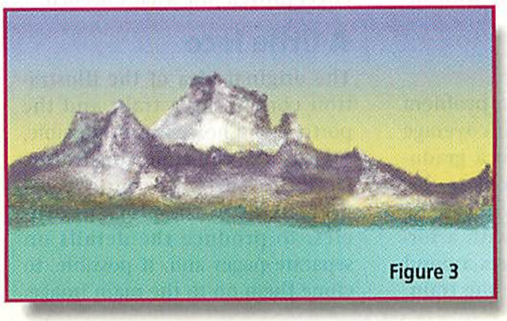
Flooded sky

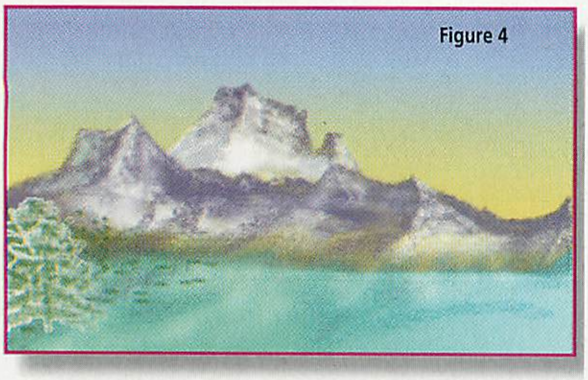
The only way to create the sky was to fill the area with a blend fill, from a light blue to yellow.

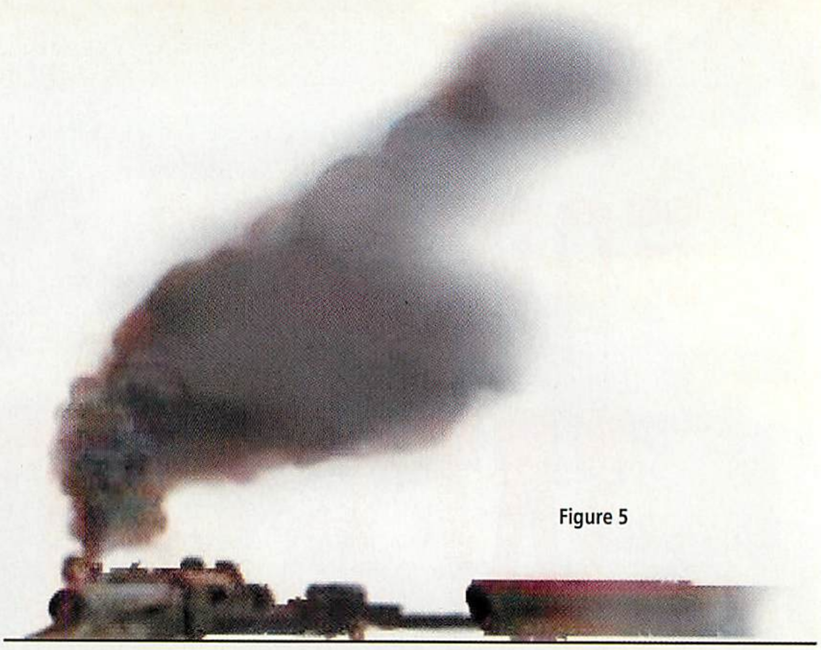
This may seem an unusual combination but as you will see later, the atmosphere I wanted was a cool early morning. This proved to be the easiest single operation and produced a beautiful graduated blend, as shown in figure 1.

The tools determined the mountain range – the airbrush wasn't able to incorporate the brushes I had designed and used in the earlier articles, so the picture would need to enable the use of the tools that were available for example crayons, stipple brushes and other tools that produced a 'broken or stippled' effects. Hence, the mountains were an obvious choice, though


Figure 2


Figure 3







they had been the basis of other illustrations. The crayon was adjustable in both opacity and size, though having said that, the size was limited and the shapes confined to square, round or oval.

Citadels in the sky

It was just a case of choosing a point in the sky and beginning work. I chose a dark brown/grey colour to paint the mountains and began with the outline of the largest mountain at the back, then painting the closer monoliths. I used the same tool and applied the white snow, as shown in figure 2. This is where the problems began. I couldn't get the coverage with the crayon tool because it produced a broken line, and the airbrush was also prone to skip the one area that I wanted to cover.

The Big Picture, has a very unique menu system, one that takes a lot of getting used to, not one that comes naturally to RISC OS. Each time I chose an opacity setting for a particular tool, and wanted the same effect, only using a smaller or different tool, the opacity re-set to 100 per cent, making it necessary to re-adjust the transparency indicator – very time-consuming.

I tried to give the impression of the light coming from the right of the picture, so the left side of the range was in shadow. There are a number of preset textures for the various tools, and the ones that produced the best effects could be rather strong and cover the desired impression already achieved. This was the case with the shadowed area of the mountains, so there is less snow on the tops. This was because it became tedious painting the snow and then trying to get back the rocks that disappeared beneath the drifts, so the upshot was that once I got the right shadow, the mountains were left with little snow – figure 3.

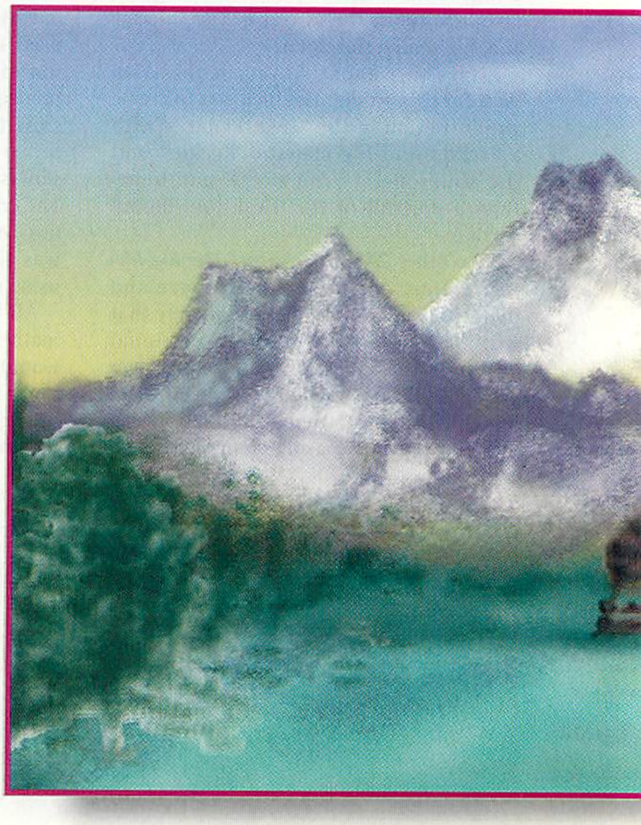
Forever green

The foreground proved to be a problem because I couldn't get a smooth coverage of the area without resorting to a graduated fill, and I wanted a 'field' look to this region, so it looks rather scruffy. The base of the mountains was hidden with a forest, and I wanted to bring the trees around the sides to provide a frame for the train. These were also very difficult to generate – being slowed down by the airbrush, and the inability of the other tools to produce the desired affect.

I thought that I would create the trees on a separate page and paste them back – the only problem was that the soft edge of the tree gave it a halo effect, and with no smudge tool the trees had to be gone over with the airbrush – figure 4. Also, though the sky was quite effective, it lacked depth so the high cirrus clouds were added. This was one of the easiest operations – I used the airbrush with an oval setting, and the 'hit and miss' effect proved just what I needed.

A little loco

The original idea of the illustration containing a train and the portrait of a horse wasn't possible, mainly for the time constraints that the software imposed. I decided, as in the previous articles, to produce the details on separate pages and, if possible, to clone them on to the main image.



If this did not work I would paste the images on to the scenic backdrop.

Though *The Big Picture* claims to be able to clone images from other scenes, it's not as simple as it could be and is very restrictive. What you have to do is cut out the image you want, which is then saved as a *motif* in *The Big Picture* – this is the image which can then be cloned. If you don't want the background you have to grab the graphic with the 'shrink' option selected.

This then allows you to grab the image you want and produce a 1-bit mask around it so it is in isolation – that is if the background is a single colour. The reason for this is because the 'shrink' facility can recognise a colour boundary and cut round it. The problem with is, however, is that it recognises the first boundary that it comes to – which is fine if your picture is on a single colour, but if it is on a multi-coloured background you have problems.

I produced the train on a white background, so the cut with 'shrink' implemented (this must be chosen from the menu on the icon bar) produced the train – figure 5.

The train was created with the airbrush, and because of the limitations it was kept very simple. Only the impression of the engine was produced and the carriages were very basic oblongs. The only concession to realism was the light line along the main boiler, and the perception of the cow-catcher.

The main element of this magic machine – the old steam locomotive – was, of course, the belching 'smoke'. The airbrush was used in a circular movement to generate the swirling effect of the smoke clouds, starting with the darkest colour. The overall impact of this pollutant on wheels seems to work and the ancient western mood is rekindled – figure 6.

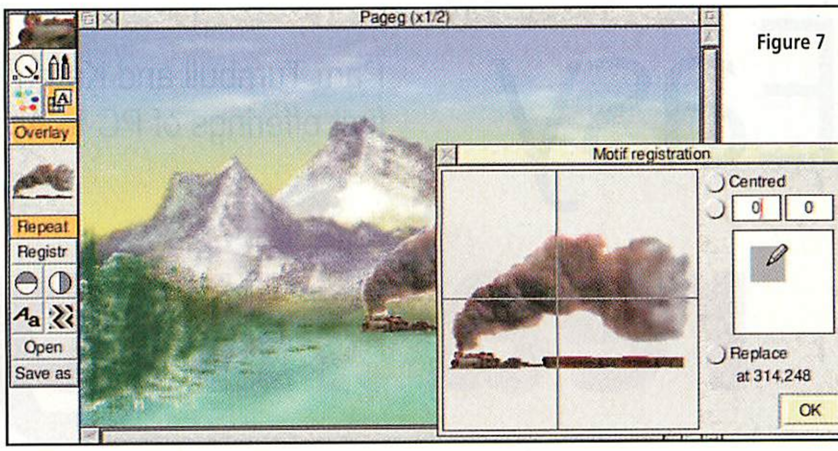


Figure 7

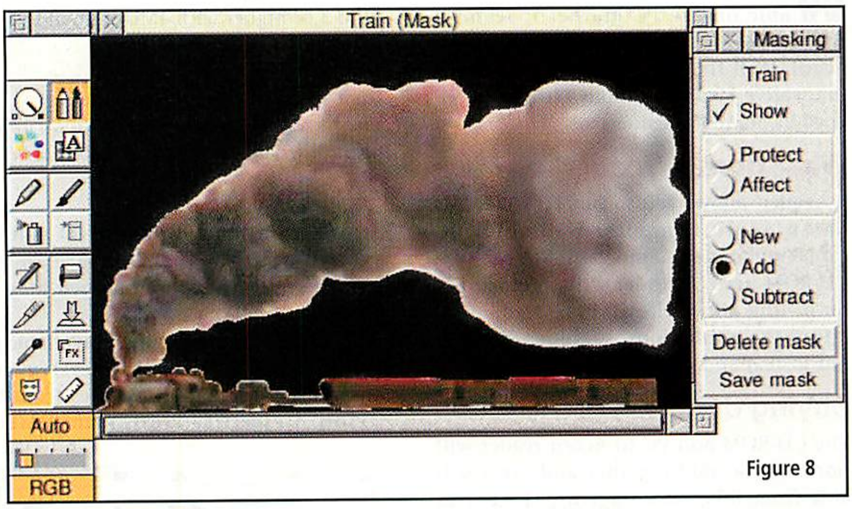


Figure 8

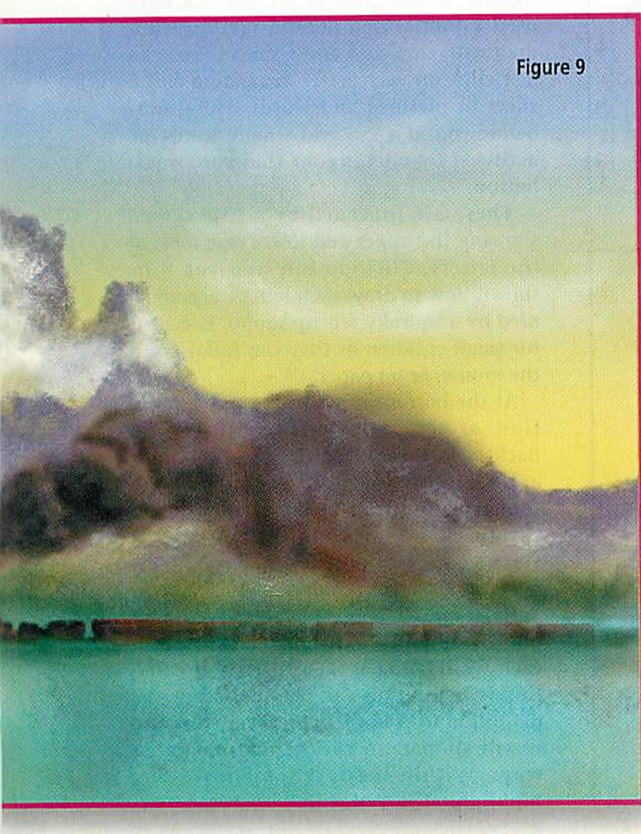


Figure 9

If you are pasting or cloning you must be careful not to inadvertently select the *repeat* option because this facility will produce a *tiled* effect. The cross hairs – figure 7 – gave the starting point of the clone. When it is applied to the new page this cross represents the part of the image that will appear when you begin to spray, or whatever tool you are using. You can see the problem that arises from *The Big Picture* choosing the 'shrink' option, choosing its own boundary and a single bit mask – it has left quite a lot of white around the image – figure 8.

It's also difficult to see where you are cloning from because the only reference you have is the partial image in the small window at the top of the tools menu.

I tried the masking capability, though I knew the mask was only a single bit one, which would mean the edges would be very 'stepped'. I was hoping to be able to cut the train 'through' the mask but this facility was not available because the cut and paste didn't recognise the mask.

The final image had to be worked to remove the white edge, and the smoke extended slightly with the airbrush, so this white ghost effect disappeared. Once the final train image was cloned onto the roof of the mystic West, the final episode was concluded – see figure 9. AU

Product details

Product: The Big Picture
Supplier: Longman Logotron
Address: 124 Cambridge Science Park, Milton Road, Cambridge, CB4 4ZS
Tel: (01223) 425558
Fax: (01223) 425349
Price: £73 + VAT

Easy reading

Pam Turnbull and Karen Peach look at the first offerings of PC to Acorn CD readers

With such a range of CD-ROMs available on the PC market it seems a shame they can't be easily run on an Acorn. Well they can now. Newly formed Innovative Media Solutions Ltd has developed PC to Acorn Readers.

What does a 'reader' do?

A 'reader' allows you to run PC CD-ROMs on an Acorn computer without a PC card/Emulator or sound card. But each PC CD-ROM needs a reader written especially for it – this allows the CD to be read, translating the animations, graphics, sounds, music, text and/or video into RISC OS.

Buying details

The CD-ROM and PC to Acorn reader will normally be sold together and are available from IMS, Acorn agents, IT Centres and other resellers. If you already have the CD-ROM, IMS will sell a one-off reader for each title. Also contact IMS for any bulk order prices/discounts.

System requirements

All MPC – or multimedia PCs to the uninitiated – CD-ROMs (with a few exceptions) require the following to run properly on an Acorn computer:

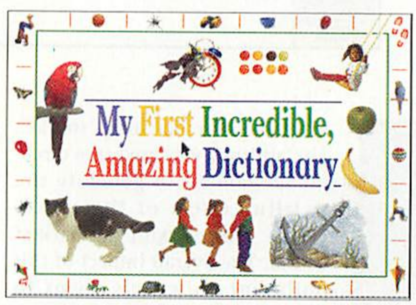
ARM 3 or higher with 4Mb of memory
RISC OS 3.1 or above
MultiSync monitor
Dual-speed CD-ROM drive or better
They are not suitable for A3000 (unless upgraded), A3010, A3020 or A4000 series.

Availability

At present a limited number of titles is available although many are in the pipeline (a list of those planned may be obtained from IMS).

'Readers' will eventually be available for many other Dorling Kindersley and Microsoft titles as well as titles from the Oxford University Press, Attica, Media Design Interactive (MDI) among others.

One hold up is because IMS are still waiting for information about the Indeo Player – this is the latest PC Mono/Stereo Video Player from Intel. Once ready, more titles will be available.





Out now

Dorling Kindersley titles:
P.B Bear's Birthday Party (£33.19 ex VAT)
The Way Things Work (£44.26 ex VAT)
My First Incredible Amazing Dictionary (£33.19 ex VAT)

Microsoft HOME series titles:
Dinosaurs (£39 ex VAT)
Movies can be played using the in-built IMS AVI Video Player
Musical Instruments (£39 ex VAT)
The 'reader' has been optimised to run on all Acorn computers with 4Mb of memory, including A3000 and A4000 series which uses an 'Oscar' CD drive via the parallel port.
Ancient Lands (UK edition) (£39 ex VAT)
This has been released without the player for the videos. The CD will have a voucher for a free upgrade when 'Indeo' becomes available.

Ubisoft title:
Kiyeko and the Lost Night (price TBA)

My First Incredible Amazing Dictionary

Ages: 4-7

Metamorphosing cats, unzipping zips, bananas and laughter are not the normal inhabitants of a dictionary. However, this Dorling Kindersley masterpiece lets you wander around the 1,000 words, definitions and links or be a tad more methodical.

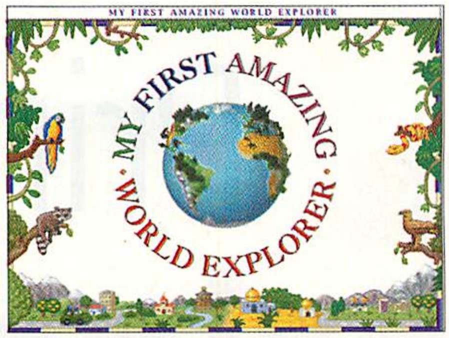
Along the top of each screen is the alphabet with the current letter highlighted. It was good to see that DK have used a font which doesn't confuse children with curious *b* and *g* shapes. You can just click on each letter at random and a sheet of pictures and words will appear before you in a 4x6 grid – more words are accessed by clicking on the *more words* button.

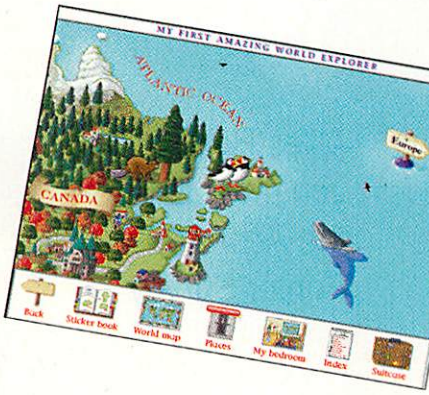
These are preceded by a title screen showing the upper and lower case form of the letters. Click on one and you'll be shown how to draw each letter – accompanied by a squeaky felt tip sound. Excellent for small children as they can follow with the mouse, or on paper.

At the bottom of each screen is a selection of icons/buttons: Surprise me, Backtrack, Games, Quick Search, Options and Quit. The pages of each screen are turned up (as with a book) allowing you to flick back and forward between pages if you prefer.

Being an adventurous soul I clicked on *Surprise me*. Up popped a rabbit and a random word and I was hooked. As well as each word being spoken there is a definition. Clicking on the trumpet reads the definition to you. Click on the picture and it will animate in curious and humorous ways. Within the text some words are highlighted in red. Click on these links





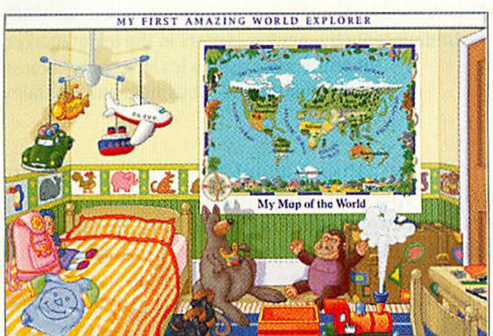


and you'll zoom to that word with its picture, pronunciation and definition.

A search facility caters for a variety of abilities. You can type in the word, highlight a letter or access the word you want via the pictogram and words. Then click go. Exploring alone is fun, even without the three games: Guess what, Spell it and What's that noise.

What's that noise is for the youngest users where they have to decide what creature is behind the curtain/door/blind from the pictures underneath. No reading skills are needed and the sound quality is very good. *Guess what* was a great hit, especially when you got it wrong. I particularly liked the idea of apples growing on athletes.

It is frowned upon educationally when a mistake is rewarded so perhaps this is one for the new readers with a parent in tow to keep them on the straight and narrow. But kids do like to play from time to time and as a whole prefer to get questions right rather than wrong.



Spell it comes in three difficulty levels – starting with a missing letter and going on to spell complete words. Click on the picture, listen to the word and then spell it choosing the letters from the alphabet underneath. I liked the way if a letter appears twice you only have to click on it once.

Your failures are denoted by a bird bursting one of the six balloons or something similarly humorous. Lose all your chances and you're shown how to spell it. As with all of the games you can play as often as you like; just turn the page for another go.

Kiyeko and the Lost Night

Ages: 4+

Based on the story *The Snakes Who Stole the Night* by Vladimir Hulpach and read in this incarnation by Ben Kingsley, it tells of a time when the sun did not set. The fantastical creatures are brilliantly drawn and detailed and the whole production is very atmospheric as the snakes starting talking to each other and Kiyeko sets off into the jungle to find the Snake King's tree.

As the story unfolds you can explore the illustrations and discover a new world and civilisation. In common with other such books you can hear the story or explore the animations within the 11 pages. Words are not individually highlighted which won't be a problem for older readers. There is lots of music such as clicking on a snake to make it sing or you could click and make the animals which live in this rainforest go to work, or how about tracking them?

The story comes in English, French, Spanish, German and Italian on the same CD so is excellent for older children learning new languages or who just want to experiment. An activity booklet lets you colour pictures and solve puzzles. This is the first in the DigiTales series from Ubi Soft with plans laid for *Payuta and The Ice God* the tale of an Eskimo boy and his adventures but aimed at slightly older children with more integral puzzle solving.

My First Incredible Amazing World Explorer

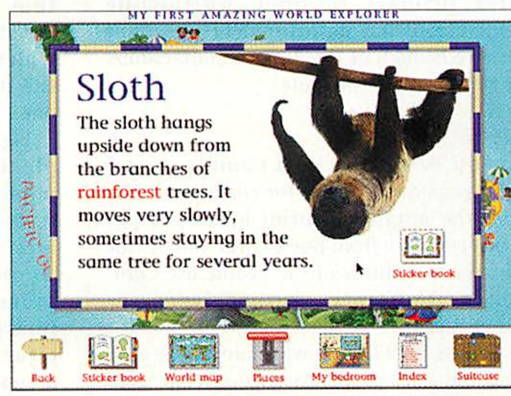
Ages: 4-9

Why does it? But why? Every teacher and parent has experienced the *why phase*. You want to answer, mostly you do but sometimes pitching the explanation is difficult. For younger children an encyclopaedia takes too long and cross-referencing and indexes can lose them entirely.

Some computer-based encyclopaedias get carried away with their own cleverness but World Explorer lets you take off around the world. You could visit the Little Mermaid in Copenhagen via the animated maps, find out facts and figures and link to other places. But there are 399 other pages to discover as well as facts, figures and skills for geography, mapping, travel, time and distance.

You can search for specifics or earn the title of *Explorer* by finding and completing the journeys hidden on the CD-ROM. If this is a bit much, sit back for a guided tour of the ocean.

But there is more to this than a CD-ROM. Open the box and you'll find your very own map book which teaches you



how to use maps and find the answers to the quiz, there is an activity book full of things to do such as discover the origin of the packets on the supermarket shelves.

You'll also find an 8-piece jigsaw puzzle, stickers and poster for your bedroom wall and a starter pack of postcards from around the world. Everything is beautifully integrated and truly multimedia. AU

Contact details

Innovative Media Solutions Ltd
PO Box 332, Bristol, BS99 7XL
Tel/fax: 0117-97 999 79
E-mail: enquire@ims-bristol

Dorling Kindersley
9 Henrietta Street, Covent Garden, London, WC2E 8PS
Tel: 0171-753 3488
Fax: 0171-753 7575

Printer priorities

Miles Roberts brings you the results of the *Acorn User* Printer Survey

Back in the April issue we asked you to tell us about your printers. The data has been collated and is ready for us to unleash the findings of the *Acorn User* printer survey.

We had a superb selection of surveys ranging from the newest printers to an old 1985 workhorse which is still going strong. We had sufficient replies about Hewlett Packard, Canon, Epson and Integrex printers to draw worthwhile conclusions but unfortunately we didn't receive enough of the other manufacturers to be able to do the same.

Canon

Almost everyone with a Cannon printer who responded uses it for correspondence and the number of print jobs done per week can vary from one to over 100. As for drivers, two thirds of the people use Computer Concepts Turbodrivers or Laserdirect.

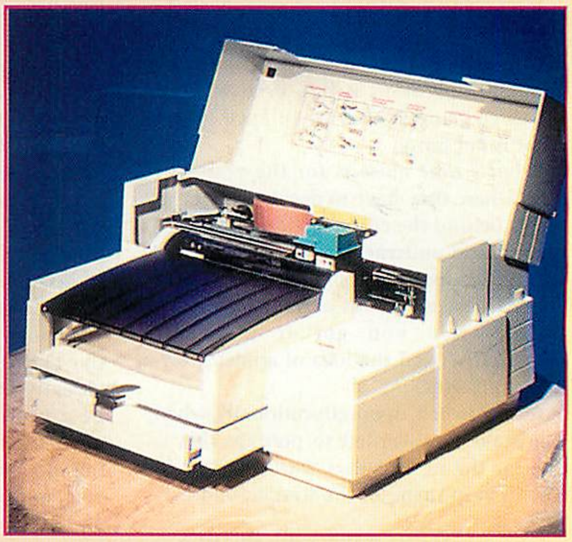
Setting up a Canon was found to be easy and the only problems encountered were getting a correct driver and sorting out the DIP switches. You found them easy to use, however many people commented that the sheet feeder was unpredictable as it sometimes didn't pick up paper correctly and occasionally screwed it up. Canon's universally small footprint won it extra points as it fits into almost everybody's work area in terms of size and ease of access and many people keep theirs on top of the Risc PC case.

One variation was in the amount spent on consumables and repairs each month. This ranged from 50p to £30 and was dependent on model and number of print jobs. Most people found the printer to be slower than they had expected but quality was as they had expected, if not better. A common problem with the printing is banding on large blocks of solid colour or black. However, Canons are very good at printing vector graphics, fancy text and DTP work. Twelve per cent of you said that the print head had failed and needed replacing which is concerning given the price of buying a new one.



Using Computer Concepts' Turbodrivers increases the speed by up to 300 per cent

Eighteen per cent of people bought their Canon printer from Computer Concepts and 62 per cent from a local dealer. The remaining 20 per cent bought via mail order. The service varied from poor to excellent so the clear message is to shop around.



Undoubtedly the market leaders in the inkjet market, HP printers are used a lot in schools because of their fabled robustness and reliability

On-site warranty wasn't included for the vast majority but was an optional extra for some. The standard warranty is one year, although this could be increased if you're prepared to pay for it.

Most had not needed to have the printer repaired during or after the warranty and so could not comment, but the few people who had, said the service by Canon UK was, on the whole, excellent.

Everyone thought it was as good as, if not better than the hype and 62 per cent said that, given the choice, they would buy Canon again. The main reason for not buying again was that the particular model was no longer available.

You found the best things about the Canon printer are speed, quality and its small footprint – plus its general reliability. It is always quiet and very easy to change the cartridges. It can also print on nearly every kind of medium going – card, envelopes, plain paper, coated paper, transparencies, back print transparencies and textile paper.

And the worst things are that it tends to print slowly when doing colour graphics and also uses a lot of ink. The flimsy construction was also a sticking point and the lack of a decent sheet feeder and output tray.

Hewlett Packard

The replies showed that most readers with Hewlett Packards use them at home for letters, one-off reports and homework. Text with black and white images are number one priority for printing out, and the number of jobs done per week can vary from one to 2,000!

It's a 50/50 split when it comes to using a driver between Acorn !Printers and Computer Concepts' Turbodriver but some

people use both because they found that each had their advantages under certain circumstances.

Setup is fairly easy and problems encountered were with modifying the driver so that the page sizes were correct. It is easy to use with no real problems except for the sheet feeder that has difficulty picking up card. The printer fits well into most peoples' work area even if it is a tad too large.

Variations in money spent on printers for inks and repairs per month varies from 50p to a whopping £95 for a semi-industrial £3,900 laser model! Most people think it is as fast, if not faster, than expected and also gives better quality than expected. The quality of text and mono or greyscales is good and the poor areas are colours which tend to look muddy and don't match the on-screen colours. The Hewlett Packard range appears to be very reliable and has almost never failed.

Sixty per cent of people bought from a local dealer and were, in the main, very pleased with the service they received but those who had bought by mail order were rather less enamoured with the service.

On-site warranties were more common in the HP camp and 35 per cent had on-site help available if it was needed. General warranties were from one to three years in length. The few people who had needed repairs under warranty said they had received excellent service from Hewlett Packard and nobody had needed a repair after warranty.

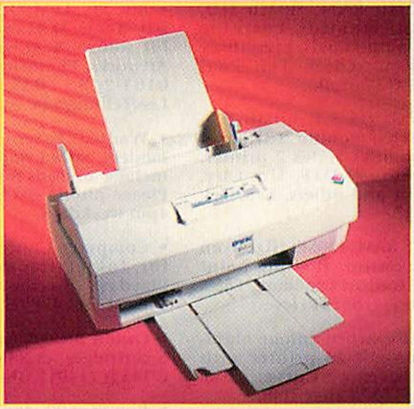
Everyone thought that their HP printer was as good, if not better, than the hype and 72 per cent said that given the option they would buy the same again.

You thought that the best things about Hewlett Packard printers are that they are fast, reliable, the life of the cartridges is long, the paper feeder is good, it is easy to use, very robust and it is easy to change the ink cartridges.

The worst things about them is that they use water soluble ink and the ink cartridges are expensive to buy. Size is also a problem, and one person wrote that it had difficulty in picking up paper, but that was due to the humidity problems of Hong Kong!

Summary

Choosing a printer is a very personal and individual choice. It all depends on what you want it for. If speed is top priority and colour unimportant, a cheap laser may suit. If, however, you need high quality colour pictures you would be better with a more expensive inkjet like a Canon BJC 610 or a Hewlett Packard 850. Use the results as a guide – these are experiences of Acorn users and may help you choose, but at the end of the day it's totally up to you.



Epson have been producing high quality printers for years. You were impressed by their ease of use and low ink costs

Epson

The survey results show that Epsons are used in the home for correspondence and one-off reports where text and colour images are most important. The number of jobs varies from one to 75.

Acorn's !Printer driver is used by 80 per cent of the people and the remaining 20 per cent use Computer Concepts Turbodriver.

Setup seems to be fairly easy – just a few problems with alignment and the printer driver. It is easy to use and the only problem is the amount of ink used. All Epson printers fit into the work area very well.

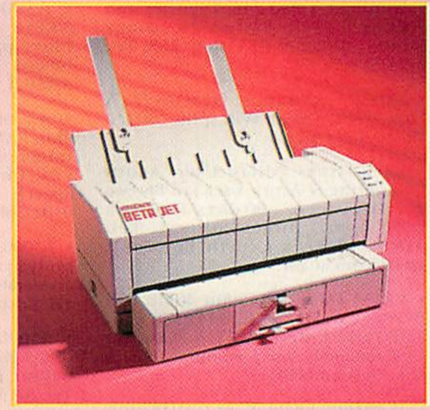
Amounts spent per month on inks, special papers, and repairs didn't vary as much as the other types of printers – from less than £2 and at tops £15.

The speed of an Epson is as people expected and the output is usually better than expected. Epson tend to be poor for printing bitmaps and photos and banding occurs on large areas, although text is very good and so are greyscale images. Apparently, blocked jets is a common fault on an Epson.

Ninety per cent of the printers were bought from a local dealer and only 10 per cent were via mail order. The service that people received was on the whole good. On-site warranty was only included in 20 per cent of the cases and general warranty was on average two years.

Epson UK give excellent repair service under warranty, but no information was given for after warranty. People thought that Epson did not fare quite as well as the hype suggested and only half said that given the choice they would buy it again.

You found that the best things about an Epson are its ease of use, low ink costs, simple cartridge change, print quality and size. The worst things – its lack of purpose written drivers for certain types, speed in high resolution modes and banding on graphics.



Integrex have been producing colour printers for longer than almost everyone else and are still going strong

Integrex

Integrex are used mainly at home for correspondence and camera ready artwork. The number of print jobs varies from 2 to 30. The drivers used are Acorn and Integrex's own. They are fairly easy to set up and the only problem found was with positioning the DIP switches correctly. They are similarly fairly easy to use although the printer's sheet feeder is a bit erratic. All models fit very well into the work area.

People spend between £5 and £15 on their Integrex which is usually slower and can give worse results than expected. Colour photographs are generally too dark and the ink spatters slightly. Vector graphics are good though. Quite disturbingly a few people said that bits have fallen off the printer.

You thought the best things about the Integrex printer are its small footprint, print quality, speed and its simple control panel. The worst things are its single cartridge for three colours (which means that when one runs out you are losing the other two as well), the sheet feeder that doesn't accept paper over 80gsm, the cost of inks and the cost per page, it is difficult to swap cartridges and unsuitable for high volumes. AU

Contact details

Integrex
Tel: (01283) 550880/551551

Hewlett Packard
Tel: (01344) 360000

Epson
Tel: (01442) 61144

Canon
Tel: 0181-773 3173

Free Ads

• Scanlight Video 256, Digitiser and scanner, £130, Vision 24 colour printer, 508 lines Hi-Vision, £55. Tel: (01425) 622259.

• Sale or exchange: Hearsay 2, A Link. Cyber Chess. Will split – offers. Tel: (01626) 62936.

• Back issues: Micro User, Acorn Computing & Acorn User Jan 86-Dec 95 (120+ issues), + 80 discs. FREE to a good home. Buyer collects. Tel: 0181-346 3768 (North London), ajas2@cam.ac.uk

• VRAM 1Mb, £30. 2.5in 40Mb IDE Drive Conner CP2044PK, £20. 210Mb IDE drive, 3.5in Conner CFS210A, £60. Tel: Jonathon (01223) 561190 (Cambridge).

• Wanted: LBP4/8 or Calligraph Laser printer. Tel: (01384) 820642 (ask for Vince).

• A5000 RISC OS 3.1, 4Mb RAM, 40Mb HD, Acorn colour monitor, with manuals. £595. Tel: Oxford (01865) 862143.

• A5000, 8Mb RAM, 485Mb HD (SCSI) AKF18 monitor, LBP4 Laser Direct printer, CD-ROM drive, PC Emulator, game pads (2), Interface card for scanner, manuals. £900 ono. Tel: 0161-445 0191.

• Risc PC 600, 8Mb RAM, 2Mb VRAM, 420Mb HD, CD-ROM, 17in AKF85 monitor, manuals, software, all for £1400. Leicester area. Tel: (0116) 2702603 evenings.

• AKF60 colour monitor, mint condition, £160 + carriage. Citizen 120D dot matrix printer, excellent condition, £50 inc. Phone: (01798) 812436.

• For sale: A3010, sound upgrade, SCART lead, Big Bang, Speedball 2. Cyber Chess, EasiWord, WIMP programming book. Individual or together. Wanted: Digital Symphony, CD-ROM sampling program, Phone Ian on (01388) 766213.

• A4000, RISC OS 3, 2Mb RAM, 80Mb HD, VGA colour monitor. 2.5 years old. Advance/Impression word processors. Loads of software. Excellent condition. £600. Tel: (01925) 766232.

• A5000, 2Mb RAM, 80Mb HD, AKF18 colour monitor, Learning Curve pack, all manuals, everything boxed as new. £450. Tel: Paul (01502) 517299 (Suffolk).

• A3000 RISC OS 3.1, 80Mb HD, 4Mb RAM, stereo monitor, £325 ono. Integrex Colourjet Series 2 printer, £75. Impression II DTP, Sim City, Speech Arctist and others, £75. Tel: 0181-508 1042.

• A5000, 4Mb RAM, 120Mb HD, Acorn Multisync monitor, floating point accelerator. Excellent condition. £550. Tel: Bristol (01934) 852540 (eves).

• A3000, 2Mb, Acorn colour monitor, Citizen Swift 24 printer with colour kit, Learning Curve. £300. Tel: (01970) 617576 after 4pm.

• Star LC-24-200 colour printer. Takes A3 paper, £95 ono. Original 256K Pocketbook also for sale, £135 ono with A-Link and software. Call Sam on 0161-797 2498.

• Games for sale: E-Type, Terramex, Nevryon, Apocalypse, Enter the Realm, Chopper Force, Populous – £5 each. Sensible Soccer, Flight Sim Toolkit – £10 each. Holed Out, Powerband, Drop Ship, Grevious Bodily 'Arm – £5 each (bought as Custom McCoy). Tel: (01661) 825984.

• A3000, RISC OS 3.11, 4Mb RAM, 80Mb HD with Atelier, PC Emulator, Acorn DTP, EasiWriter, colour monitor, £295. Panasonic KXPII24 dot matrix, £75. Call (01234) 721032.

• Risc PC 600, 5Mb, 210HD, AKF60, all in excellent condition, with all manuals and boxes etc. £900 ono. Tel: Derby (01332) 672480.

• For sale: RISC OS 3 Programmers Reference manuals, £40. Impression Style, £30, Easy C, £20, Pendown Plus, £10. Tel: Dean 0181-658 0940.

• Free: Lots of Acorn User, Archimedes World, Risc User, Acorn Computing. Very interesting read. Must be collected. Tel: (01274) 877299 (West Yorkshire).

• Wanted by boy with cerebral palsey and no funds. Any educational software or hardware as Acorn 3010 and monitor on last legs. Tel: 0161-456 1153.

• Risc PC, ARM 710/40, 24Mb, 1.4Gb HD, 4xCD, SCSI card, Eagle card, 16 bit sound, Scanlight, Impression, Artworks, PhotoDesk etc, £1750. Tel: 0181-248 0353 or e-mail Leo.Telling@bbc.co.uk

• Wanted: External Internet ready modem, speed not important, must include all leads for A3000, max £40. Please phone (01484) 841687 after 4pm weekdays.

• Computer Concepts Turbo Driver for Inkjet Canon printer, £30. Playdays disc for Archimedes, £10. Tel: (01256) 478322.

• Canon BJC600 colour printer with 6 cartridges, excellent, £120.00. Tel: (01452) 714017 Gloucester.

• Risc PC 600, 486 second processor card, 8 megs and 2 megs VRAM, 420Mb HDD, Elite, Starfighter 3000, HP Deskjet 520, includes all manuals, £1200.00 ono. Call Jon on (0974) 542915.

• Star LC24-200 24 pin colour dot matrix parallel printer. Paper Park, friction/tractor feed. 5 fonts with italic versions. Boxed with manuals and ribbons. VGC. £100 ono. Tel: Newark (01636) 79731.

• A5000, 2Mb, HD80, AKF18 monitor, DOS Emulator, Full Advance software plus games and manuals, £700. Tel: (01992) 812654 (Essex).

• For sale: BBC Model B, 32K with extras. Sideways RAM, Interword, Stop Press and more. Interested? Tel: (01784) 433516 or send SAE to Stephen Scott, 17 Northcroft Villas, Egham, TW20 0DZ.

• A3000, 2Mb, 120Mb hard drive, sound sampler, MIDI, Labtec speakers, RISC OS 3.11, Acorn monitor, serial interface, joystick interface, joysticks, many games, 40+ magazines, Learning Curve pack. Offers. Tel: 0151-630 1523 evenings.

• Starfighter 3000, brand new, unused, unwanted gift, £20. Winner of best game in Acorn User Awards 1995. Tel: Adam on (01580) 752929 after 4pm weekdays.

• Risc PC 600, 12Mb RAM + 2Mb VRAM, 420Mb HD and DX2 PC card, software galore incl DOS + Windows. £1300 ono. Tel: (01733) 342822 after 8pm.

• A5000, 4Mb RAM, 40Mb HD, AFK18, little used. Lots of software, games & mags. RISC OS 3.1 and manuals, £595 (for quick sale). Tel: West Yorks, (01924) 262655 (eves), (01924) 280982 (9am - 5.30pm).

• Free to a good home. Automatic sheet feeder for Acorn Olivetti) JP-150 printer. Owner collects. Tel: Cambridge (01223) 360636.

• Archimedes used hardware, software and books for sale at very reasonable prices. Please phone for detailed list. These unwanted but very useable items are taking up valuable space. Contact John (01707) 324804 (South Herts) for list by return post.

• Software: Eureka v3 (unused) £70, TouchType £15, 10/10 Maths £5, English £5, RISC OS 3 Fonts £10, Joy Pad (unused) £10. Tel: Reading (01734) 426843.

• A5000, 2Mb RAM, AKF18 monitor, RISC OS 3.10, 80Mb HD, SCSI board, EconNET £500 ono. Phone Dominic 0181-600 2116 (South London) daytime or e-mail dperry@deagostini.co.uk

• A5000, 2Mb RAM, 41Mb HD, AKF18 monitor, PC Emulator, education and games software, all manuals included with Star colour printer. Mint condition. £695. Call Mun on 0181-675 8648.

• IOTA Image Animator in original case with instructions, immaculate, £25. Tel: Simon on (01933) 460166.

• Aleph One PC card 486/50MHz with 4 meg RAM, £200 ono. A3000 5.5 drive interface, £30 ono. Parallel printer port CD, £100 ono. Tel: 0121-705 7193 after 6pm.

• A3010 Family Solution, 2Mb RAM, RISC OS 3, 14in Philips colour monitor. Complete with games, boxes, table, manuals and introduction tapes. £350. Tel: (01902) 846983 (Wolverhampton).

• Wanted: Computer Concepts ColourCard Gold to fit A5000. Tel: D Anderson on (01465) 714946 (eves).

• Risc PC 700, 4Mb RAM, 2Mb VRAM, 425Mb HD, 486 card, with monitor and Turbo Pascal. Boxed as new, £1500. Tel: Geoff (01568) 615285.

• A3010, 2Mb, 80Mb HD. Acorn monitor. C/W all boxes and manuals. Plenty of software. £445 ono. Also BBC B + disc drive, £90 ono. Tel: (01543) 491198 (evenings).

• For sale: 6 Speed ATAPI CD-ROM Drive with CDFS software for IDE bus machines. Ideal for Yellowstone RapIDE card, £85 ono. Call Paul on 0171-202 3309.

• A410 upgraded to A440, ARM 3, VIDC Enhancer, I/O podule, without monitor, original packing, excellent condition, £250 ono. Tel: (01276) 24306.

• Acorn C/C++ unopened and still wrapped in plastic cover. Only £150 incl p&p. Phone (01962) 779964. Ask for Robert.

• Risc PC, 16Mb, 2VRAM, Quad CD, 1.6Gb Hard drive, Photodesk 1-2, 1 year guarantee, no monitor, £1100. StrongARM voucher. Ring 0151-639 7261 after 6pm.

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Your name:.. Telephone no: ....



info

Another handy selection of programs and tips from Dave Lawrence and Dave Acton

Map projection

Author: Tom Tanner

Many of you may be well aware of the stupidly small number of DOS file types that CDFS knows about. No matter how you look at DOC, TXT, BAT, EXE, BIN, TIF, COM and PCD, you always come out at eight. What is more bizarre is that EXE, BIN and COM can not even be usefully run on an ARM-based machine!

A public-domain program to get round this problem has been floating about for a while now, but we've just received a useful update to it from Tom Tanner call *FileTypes*. What this does is modify the CDFS module code to enable it to use a larger lookup table for its type mapping. From RISC OS 3.5 onwards, this table is placed in a 4K dynamic area and allows over 500 mappings to be made. On earlier OS's you are restricted to 57.

Double-clicking the application installs the patches into CDFS and reads the current DOS mappings known to DOSFS with the DosMap command. In most cases this will be sufficient, but if you want, it is possible to add extra mappings by hand from the command line – a number of other options, such as listing the known types and removing mappings, are also available from here. The boot file of the program sets up an aliased command to make this simple: *CDMapping. Typing the command with no parameter provides help on the various options available.

As an added extra, Tom has also supplied a set of over 130 mappings as an obey file. Simply double-click *Mappings* to install them. You will need to do this before running *FileTypes* if you wish to use them as CDFS mappings.

An alternative approach

When we received Tom's program, we were interested in how it went about extending the internal eight mappings. Strangely enough, we found that CDFS should be able to handle an infinite number of mappings! The only reason it can't is because one of the ARM instructions in the module is subtly wrong.

In version 2.21 of CDFS at offset &2F40 is a MOVEQ R10, R1 instruction. (We don't have copies of other versions, so cannot speak for them). This is actually the code that should be returning the mapped filetype. The problem is that the calling routine is expecting the result in R1 and internal to this routine the type is stored in R10. Invert this instruction to MOVEQ R1, R10 and the code is fixed. A quick fix prog ('!FixCDFS') is supplied on the disc to perform this task.

All that remains, of course, is to supply the extra mappings. These need to be stored in a text file in the form:

```
TXT &FFF
WAV &FB1
...
```

with one mapping per line. Further examining of the CDFS code reveals that all you then need to do is point a system variable at this file. There is, in fact, another, ahem, 'feature' of CDFS which makes this a trifle odd though. A zero byte terminator has been left off the string so the variable is actually called:

```
CDFSNewFileTypePath$FileDOC
```

The final 'Doc' is actually the first entry in the default set of mappings! Luckily, the DOC is correctly terminated so the system variable is still valid. With this file saved, the variable saved and the corrected CDFS installed, extended DOS mappings will work as Acorn intended.

On the downside, the code which accesses this file is not the most efficient in the world (it linearly searches the file a BGET at a time), so is potentially slower than Tom's code which directly accesses its storage area. To help this along, we've simply added a Mappings file into the CDFS directory in Resources: and redirected the bizarre system variable as appropriate. As CDFS already registers with ResourceFS, we added our file into the existing CDFSRes module, a copy of which can be found on the disc. The obey file *NewRes+Map* can be run to load the new module and set the system variable.

Pick your own...

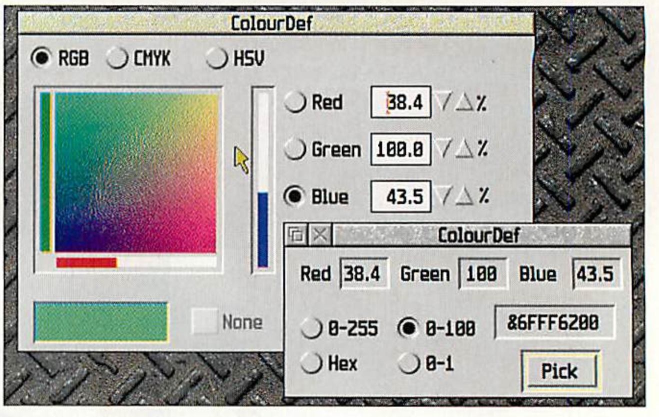
Author: Mrs A Miskin

Mrs A Miskin (author of the Infocom compiler front-end, April 1995 and the enhanced *Today* calendar, Christmas 1995), has sent us a small, but perfectly formed, demonstration of the colour picker module first seen in RISC OS 3.5. Users of RISC OS 3/3.1 can still use the program, but will need a copy of the *ColourPicker* module.

The utility enables you to find the R,G,B values of any colour using the Acorn *ColourPicker* module. It is particularly useful to users of the PD ray trace POV, which allows you to select colours for your object from a full 16 million colours, but needs red, green, blue settings in the range 0-1.

Select on the iconbar icon opens the control window, while Adjust opens the *ColourPicker* window.

The R,G,B values of the chosen colour and the 32-bit colour number are displayed in the control window. The format of the R,G,B colours can be toggled between Hex, 0-255, 0-1 and 0-100, depending on how you plan to use them. Clicking on the Pick icon opens the *ColourPicker* window, where a choice of colour can be made in RGB HSV or CMYK modes. Clicking on the OK icon causes



the values in the control window to be updated. Using Adjust leaves the *ColourPicker* window open.

In at the deep end

Author: Sanjay Pattni

One of the major advancements introduced to RISC OS 3.5 was support for 16bpp and 24bpp sprites, often called 'deep' sprites. Acorn has not produced upgraded versions of the *SpriteExtend* and *ColourTrans* modules necessary to allow these sprites to be displayed on older machines, but there is really no reason why an A5000 couldn't display them as best it can. After all, new versions of ChangeFSI can render deep sprites into 8bpp modes remarkably well.

To overcome this limitation, Sanjay Pattni has written a module called *Deeper* which cunningly intercepts sprite and colour translation calls and allows deep sprites to be viewed on 'old' hardware – what you will need though is RISC OS 3.1 and *ColourTrans 1.57*. Note version 1.07 of *ColourTrans* (in the ROMs) may cause problems.

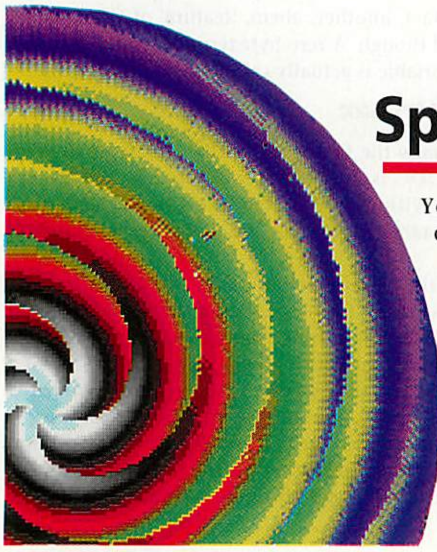
Deeper will allow many apps to display new format sprites without any (or only minor) modification. Generally speaking, any well written application which doesn't do anything 'clever' or try to edit the image will be compatible with *Deeper*.

Non-deep, new format sprites are modified to make them old-style. Deep sprites are translated on-the-fly to 256 colour sprites when required.

There must be sufficient free memory to transform the deep sprite to a 256 colour sprite whilst plotting. The deep sprite is converted to a 256 colour sprite with the default 8bpp mode desktop palette, for example palette is not optimised for the sprite. Sprites: the mask is ignored. Programs which assume the format of the image data will not function correctly, for example automated tracing programs like *!Trace* and the Turbo Printer Drivers. Applications which display info on sprites will incorrectly say the sprite is in a 256 colour mode.

Once loaded, two calls are provided – *Deeper_On (this is the default state when the module is loaded) and *Deeper_Off.

Sanjay has supplied three versions of the module. The number after the module name indicates how many bits per pixel are used when displaying the image. Sanjay says that *Deeper4* is normally quite sufficient, the extra memory used by *Deeper5* not producing noticeably better results and *Deeper3* producing noticeably 'worse' results.



Spiral stare-case

Author: Keith Wood

You know us – ARM code, swirly patterns, bizarre mouse controls, lots and lots of colours. Keith Wood's *Spirals* is classic *info material.

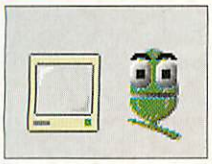
Moving the mouse changes the increment for the radius and the angle, and thus changes the pattern observed on the screen. Pressing one of the keys 1 to 4 will change the speed of rotation. The right mouse button clears the screen, the middle mouse button selects colour look-up, the left mouse button selects grey look-up.

The program is based on the use of polar coordinates to describe a spiral. To draw the spiral, the program starts at the end of the spiral, and decrements the angle and radial components until it reaches the middle of the screen. The middle of the screen is effectively reached when the radius is equal to zero. Points are plotted at (r COS a, r SIN a)

The trigonometry is performed using tables for speed, the colour of a point is determined as a function of angle and also by a look-up table.

On the blink again

Author: Andrew Ayre



Andrew Ayre has sent us a slightly updated version of his desktop silly *Blink*. Good new bits are winking (nothing like a good wink every now and again), and the fact that the sprites in ResourceFS are now filetyped as Sprites!

Sine of the times

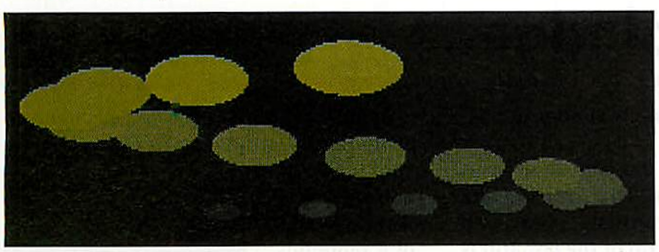
Author: Mike Goatly

From the author of *NeonFrog* comes this latest whizzbang graphic demo – a sine wave. Aha, but no ordinary sine wave. Mike Goatly's latest creation, *CoolWave*, is so cool as far as waves go, that you may see minute ice crystals forming on your monitor.

The grey dots gently undulating may be controlled in many ways. Z and X control the distance of the wave from the viewer. The pairs of keys Q/A, W/S, E/D change the rotation speed around the X, Y and Z axes respectively, and C changes the colour used.

For a random rotation and colour just press R. Space stops any rotations and ! resets everything. Depth cueing is used, so distant balls appear faded. The 3D effect is therefore quite pronounced and this, combined with some spooky colours, makes the sine wave about as atmospheric as any sine wave can get.

Adventurous souls may fiddle with the program to alter the effects – four variables can easily be changed to suit all tastes. *Balls* is simply the number of balls on screen – 16 by default. *WaveSpeed* and *WaveHeight* are self explanatory and *MaxSpeed* limits the speed of rotation in any axis.

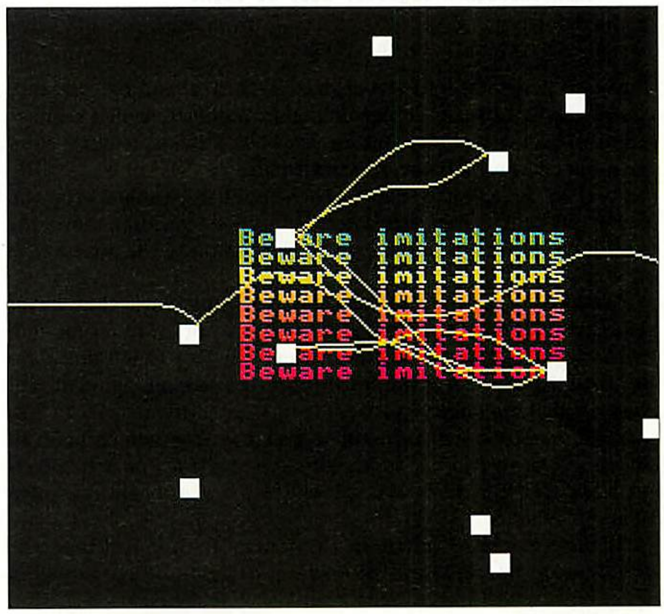


Call me Al

Author: Alistair Turnbull

The Al behind this offering is none other than Alistair Turnbull, more famed for his dazzling on-screen graphical trickery. Here he takes a break from real-time fractals and the like, and gets back to Basic with a curiously addictive little game.

"Al'sGame is a half-hour boredom reliever (for me writing it, not you playing it), written about five years ago, and still as good as it ever was. The aim is to bounce off the white blocks until the exit appears, then leave. You can't control your sideways movement (except by bouncing), but @ and ? move you up and down in a



manner that is just tenuous enough to be really frustrating, without actually being difficult. My best level is about 23. I'd be interested how other people do."

We find that the first level is often the trickiest, when there are only three blocks to bounce off. One strategical hint, though. If the blocks are so spaced apart vertically that you cannot possibly bounce between them, try bouncing off the top or bottom of a block – you don't change direction and it might be enough to persuade the exit to appear!

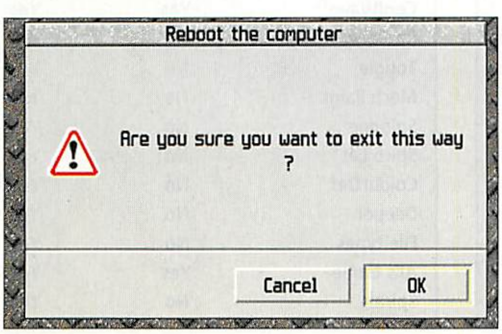
No exit

Author: Justin Fletcher

We seem to be intercepting all manner of vectors this month.

Regular patcher Justin Fletcher has continued the theme with a tiny module to protect against accidental CTRL Breaks. (Yes, they do happen – I tried to kill a task just yesterday with ALT Break but got it slightly wrong...)

ExitOut, once installed, intercepts the keyboard vector and listens out for CTRL Breaks. Upon receipt it provides a standard "are you sure?" type window to give you the chance to bottle out. Incidentally, Shift Break is disabled, but if you hold down Shift while you click on OK in Justin's window, the machine will reset but not reboot.



Resource discourse

Author: Mark Hammond

Wouldn't it be nice, we have often thought, if you could just drag things into a ResourceFS filer display and they would just somehow stay there. Alas, you just get the message "ResourceFS is read-only". However, Mark Hammond brings us several steps closer to our dream with *!ResSave*.

ResSave installs on the icon bar. Drag a file, application or directory onto the *ResSave* icon and a window pops up. Enter the filename you want your object to have in ResourceFS and drag the save icon into a ResourceFS filer window.

Now, you will noticed that the save icon changes to a module. Enter the filename for the module to contain your ResourceFS files and drag again, this time to where you want the module saved. Simply reload the module (for example, in your boot sequence) to re-install the files therein into ResourceFS.

Incidentally, for those with good memories, *ResSave* uses a modified versions of our very own utility *Register* (AU November 1992).

Spiral stare-case – the second storey

Author: Pontus Lurcock

The spirals you might wish to stare at come courtesy of Pontus Lurcock, the author of *SpiroLateral*.

"A Spirolateral might bear a passing resemblance to a *Spirograph®* picture at first" says its inventor, "but in fact it's more like a subset of Logo."

To draw a Spirolateral, the following algorithm is used:

```
Repeat
  For Length = 1 to n
    Go forward (drawing a line) for length
    Turn through A degrees, left or right
  Next
Until you get back to the start
```

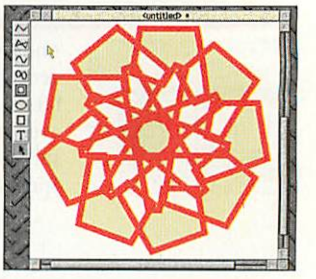
The angle A is from 0 to 180 degrees (exclusive) and the sequence of left and right turns is user-definable. *SpiroLat*, which requires Acorn's Toolbox modules and the DrawFile module, is installed in the usual way and supports interactive help.

Click on the *SpiroLat* icon to open the main window. You can specify the order of the spirolateral (n in the algorithm above, the maximum line length), the angle of the turns and the direction of each turn – L or R.

Pontus notes: "Some spirolaterals will not close; they never return to their starting point, preferring to scoot off to infinity (all even-ordered spirolaterals with an equal number of left and right turns do this). When given an infinite spirolateral, *SpiroLat* will draw one iteration only, in red.

"Clicking Menu will bring up a save box from which you can save to file or to another application. The scale factor only affects the saved drawfile; the file displayed by *SpiroLat* is always scaled to fill the window.

"If the number of letters in the 'Turns' icon is less than the order, the unspecified turns will default to right. A huge variety of different spirolaterals is possible, including some disgustingly large ones which take ages to redraw and don't look very good. In general, the more common factors a spirolateral's angle has with 360°, the simpler it will be.



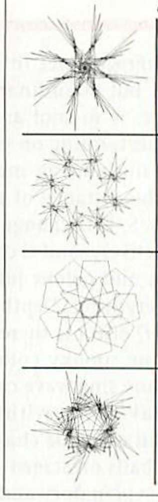
"This means, for example, that angles which are prime numbers will tend to produce larger, denser patterns.

"Once you have produced a nice-looking spirolateral, it can be further beautified by some judicious tinkering in *Draw*. Most spirolaterals look good if you change the line colour to none, change the fill colour to something pleasant, and make sure the winding rule is even-odd.

"A few examples can be found in the file 'Examples' within the *!SpiroLat* directory – though note that they represent only a tiny sample of what is possible."

A few example spirolaterals...

These look best: (1) When viewed at a larger size, and (2) With a nice fill colour and an even-odd winding rule.

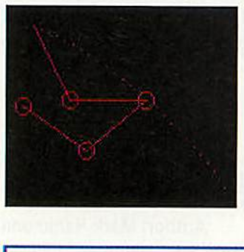


Order	Angle	Turns
11	5	LRRRRRRRRRR
13	15	LLRRRRRRRRRRR
8	100	LLRRRRRL
20	8	LRRRRRRRRRRRRRRRRRRR

Mechanical Paint and Splodge...

Authors: Alan Lowe and Geoff Blunt

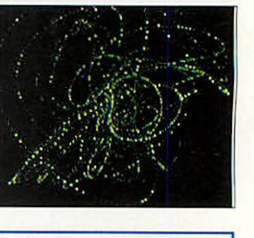
Not the latest in home decorating gadgetry, but rather a pair of graphical doodles from a pair of doodlers – Alan Lowe and Geoff Blunt.



Although the two offerings have frighteningly different titles, they are disturbingly similar in construction.

MechPaint shows a mechanism of arms connected by joints. The arms rotate around the joints at constant speeds, and the path traced by the tip of the last arm is plotted on the screen. No doubt ancient astronomers used similar methods to illustrate how the planets and sun moved round the earth.

Splodge employs a similar mechanism, although the arms and joints have been replaced by splodges of various shades of a randomly chosen colour. The result is, well, rather splodgy.



*QUIT

All programs, hints, tips, music and whatever else you can fit in a jiffy bag to the usual address please:
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or, if your submission is 100K or less, e-mail us (including your real address please) at: austarinfo@idg.co.uk

You needn't include a letter but please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. Saved screens, drawfiles, background information and the like are always useful and an SAE will ensure your discs are returned. By the way, If you are submitting material to other sections of the magazine (e.g. Pic of the Month), it is probably best to do so separately.

Compatibility table

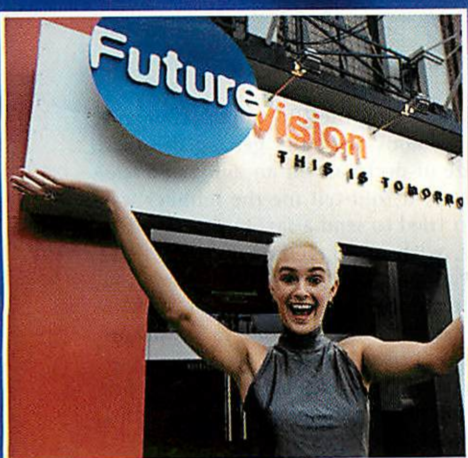
* Needs FilterMgr
** Needs a toolbox

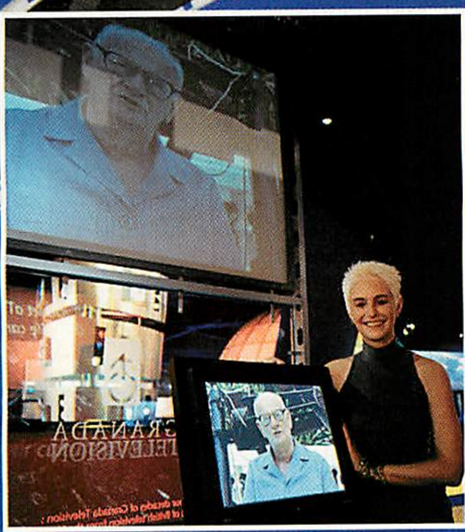
Program	RISC OS 2	RISC OS 3.1	RISC OS 3.5+
Blink	No	Yes	Yes
CDFS+	No	Yes	Yes
ExitOut	No	Yes	Yes
CoolWave	Yes	Yes	Yes
ResSave	No	Yes	Yes
Toggle	No	Yes	Yes
Mech Paint	No	No	Yes
Splodge	No	Yes	Yes
Spiro Lat*	No	Yes	Yes
ColourDef	No	Yes**	Yes
Deeper	No	Yes	No
File types	No	Yes	Yes
Al's Game	Yes	Yes	Yes
Spirals	No	Yes	Yes

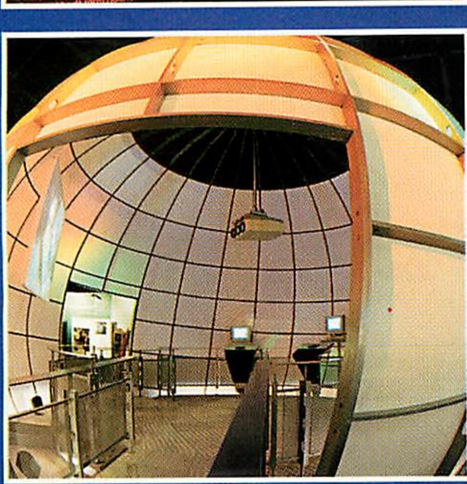
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c) Quality Street

3 Where is Granada Studios Tour based?
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Write your answers here:

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Question 2 ....

Question 3 ....

Name (Mr/Mrs/Ms): ....

Address: ....

....

Postcode .... Daytime Tel: ....

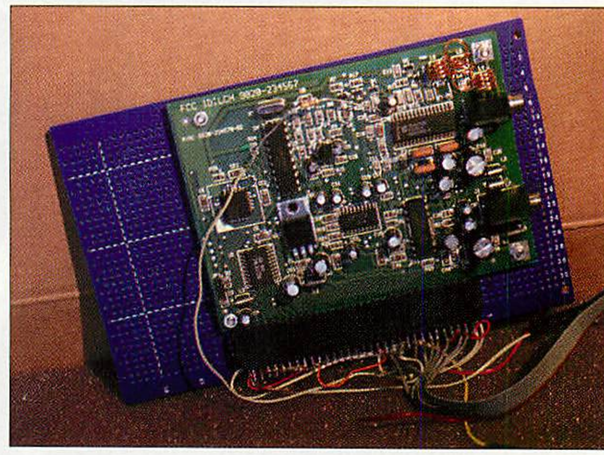
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Mike Cook's hardware series

Tuning in



Mike Cook shows you an easy way of monitoring meteors

Well I have a confession to make. I've actually been inside PC World. I did not plan to, it just happened. There I was driving around and it came into view – so I took a look round. Due to the size of the PC market, hardware has always been cheaper and a plug-in card caught my eye – it was a plug-in FM radio by Reveal computer products. This is something I had been toying with making, not only just for the reception of radio signals but for some monitoring experiments for meteors.

When a meteor enters the atmosphere it burns up and leaves a trail of ionised air – this is what we see as a shooting star. The visible flash is normally less than a second but the ionisation lasts much longer at radio frequencies – up to 10 to 30 seconds. Radio amateurs have long used this to bounce signals to get brief bursts of communications at very high frequencies.

If you wanted to monitor meteor activity, all you have to do is monitor a normally quiet frequency, then when you hear a distant transmitter appear you know it is via a meteor trail. The FM radio spectrum is an ideal source of continuously hearing this on distant transmitters, and would be ideal for such an experiment.

Anyway back to PC World. This radio card was less than £30 so I thought I would take the risk and see if I could run it in the RISC. It comes complete with a wire aerial but you have to add your own loudspeaker in a jack socket on the back. I examined the edge connector and found that relatively few were used, so it must be a simple interface. Unfortunately, when I looked at the software there was only a single windows application to drive it – there was no software or information of how to control it from your own programs.

Undeterred, I rang the UK support company and had enormous difficulty getting through. After a maze of decisions on an automatic telephone system, it told tell me the number was busy. I even tried to send a fax, but to no avail. Eventually, with prolonged mithering of the operator over about two weeks, I did manage to get a direct number to the support team who were quite baffled at me wanting to know how to drive the board myself. Finally, I was promised a developer's pack before the week was out – that was over six months ago and nothing has ever arrived.

Not surprisingly, the software would do nothing on the PC card so I had to get hold of a real PC. Fortunately, there are a few hanging about at work and this confirmed that the board actually worked, but what was the software doing? To cut a long story short, I wired the PC to a logic analyser and looked at how the software was hitting the hardware. That sentence hides about two weeks of work! It also discovered what awful code was offered on the PC, using multiple accesses just to get the timing right.

Essentially there are three controls – volume,

	7	6	5	4	3	2	1	0
WRITE	$\overline{\text{V dec}}$	$\overline{\text{V inc}}$	0	Load Word	$\overline{\text{Mute}}$	Data	Clock	Data Load
READ	1	1	$\overline{\text{Tune}}$	1	1	1	1	1

Figure I: FM Radio register structure

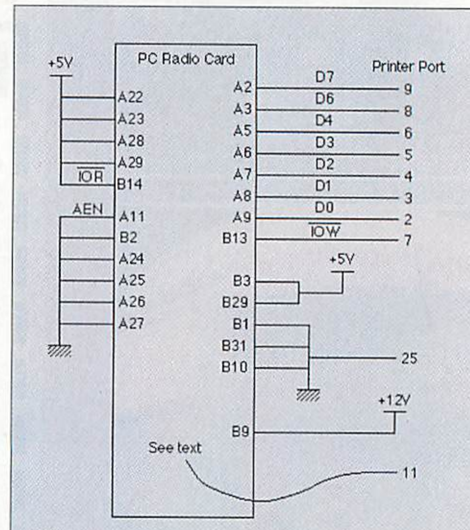
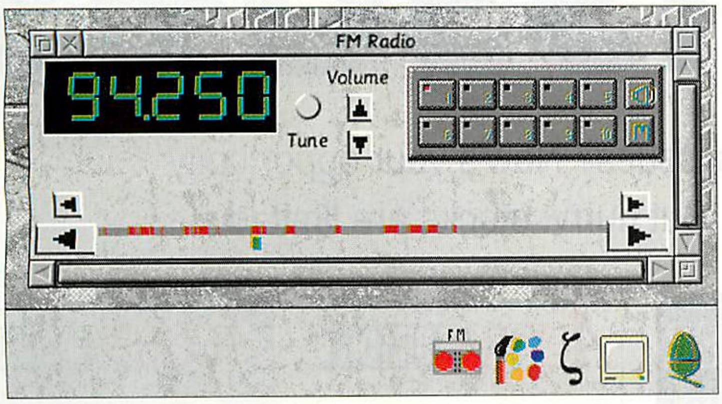


Figure II: Wiring up the board to the printer port



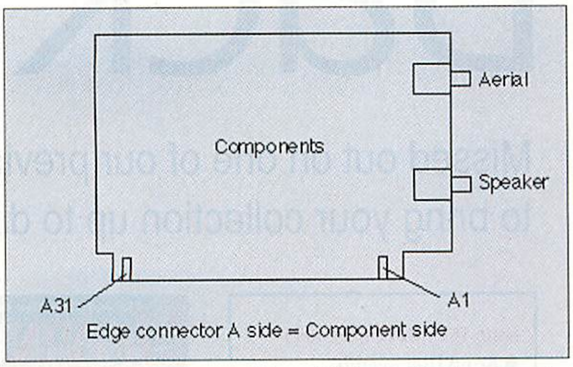


Figure III: The card's edge connector

mute and tuning – and these are handled serially through a PC card bus. Fortunately, this is something that is easy to simulate using the printer port. There is also an input to detect if a signal has been received. Figure 1 shows how the card looks to the software. The volume controls are on bits 6 and 7, a negative going pulse here will simply increment and decrement the volume. Bit 3 is the mute, and when this goes low all audio is suppressed. The tuning is controlled by three bits, data is presented to bit 2 one bit at a time, and bit 1 is toggled to clock it in. Then, when all the bits have been entered, to set the tuning frequency, bit 0 is toggled to load it in. Finally, when reading the card, bit 5 is the squelch, and indicates whether a station is being received.

In order to make this compatible with single direction joysticks, I decided to tap the squelch signal direct from the electronics on the board, rather than go through the PC bus interface. The point you need here is a feed through pad – it is marked C27 and is just above pin 32 of the TEA5712T chip. Then I could use bit 5 of the printer port to hit the IOW line – that's the write enable bus handshaking wire.

One final point is that the radio receiver needs a +12 volt supply in addition to the normal +5 volts. I taped this from pin C32 of the podule connector and brought it out on a socket to the podule's panel. You can derive this from an external power supply if you want, or if your computer does not have a +12 volt supply like the A3000.

Figure 2 shows how to wire up the board to the printer port and is quite straightforward. All you need is a double-sided edge connector for the radio card and a 25-way plug for the printer port. If you are particularly brave you can skip the edge connector and solder straight onto the gold connectors. Figure 3 shows you the way the edge connectors are numbered – basically A1 is the component side closest to the card's panel.

Now we need to write the software. On the disc are two versions – *TestDvr* which is a simple keyboard based system and *!FM_Radio* which is a full desktop version. I normally do this when I am developing software because the simple version allows me to concentrate purely on the interfacing aspect. Once that is cracked I can move onto the user interface.

Let's look at the simple system first. This is a simple program that takes keystrokes and converts them into action. Basically, you have to feed in a 24-bit number to the radio to tune it, and then toggle the load line.

Each increment of the number represents a step of 25KHz in the range 88 to 108MHz. I don't know how this number is derived but it probably has something to do with selecting division values in the radio's frequency synthesiser. I found out the base number to use with the logic analyser looking at the original PC application.

PROC_SB sends a single byte to the card by putting the data on the printer port, then putting the IOW line low, and then raising it again. PROC_ReTune uses this to send the 24-bit number while holding bit 0 high and then toggling the load word line while holding bit 0 low – all the time making sure the state of the mute bit is maintained.

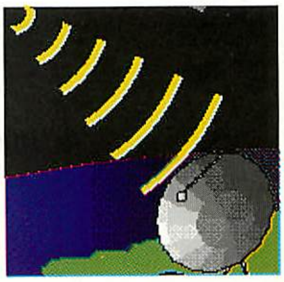
The desktop version of the software is actually far superior to the original PC application. It has 10 preset channels as well as a customised activity indicator, which is the red marking just above the green tuning block. Each red line indicates a station heard, when you use the scan command from the radio's menu.

A scan can take a few minutes, but once done the activity bar is automatically saved and loaded upon start up. You only need to do a scan when you first set up the system or if you change the aerial setup.

The two tuning arrows indicate normal and fine tuning and you can also get a course tuning by clicking anywhere along the activity bar.

You can set up a preset channel by first tuning to the required station, clicking on the 'M' button and then on the channel number you want to set. Any preset channels that are changed are immediately written back to disc. Because of this and the activity bar auto saving, you can't really run the application from the archive – it needs to be copied onto another filing system. The radio always powers up on channel 1 so make sure that this is one you like.

I have not written any meteor monitoring software for it yet but there is enough information here to make that a simple task. After I had completed this project, I did read that someone had come up with a RISC FM radio podule, but that cost over £80, so this is definitely a cheaper alternative. Happy listening. AU



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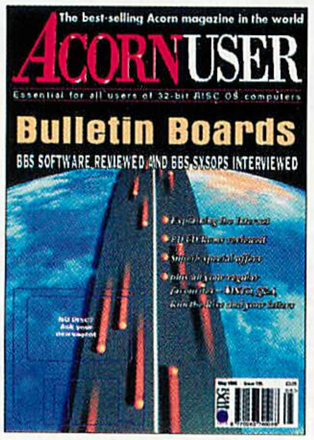
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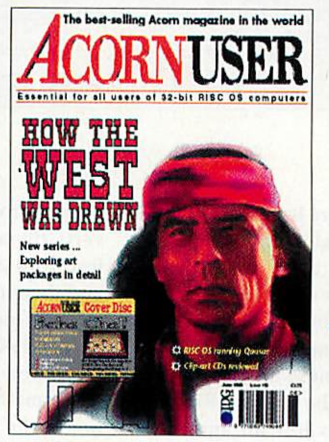
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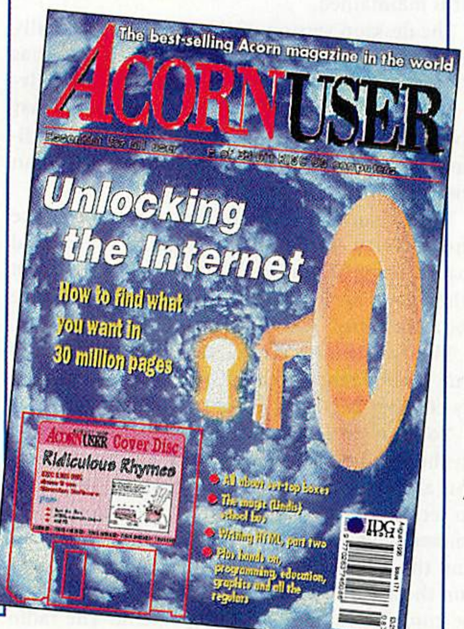
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C for yourself

Every user should have one – Steve Mumford begins writing a parachute jump database

Before I go on, I'd better point out an unexpected *feature* belonging to *AULib* that I noticed the other day – when allocating memory during the process of loading a set of templates, the program calculates the length of the window title and sets aside the appropriate number of bytes. However, I'm afraid to say that, until now, it didn't account for the zero byte at the end of the string. This caused the operation that freed the memory to fail erratically if more than one window was loaded.

It's interesting to see the effects that this style of error can generate; while trying to trap this error, I managed to truncate each window's workspace by one byte – the icons lost their three dimensional appearance, but other than this the program didn't appear to be significantly affected.

There's one other point I should make clear. When building your menus it's possible to create submenus of three types: specifying a value of -1 if no submenu is required, the address of another menu datablock in the case of a standard submenu or a window handle to pop up a window. Unfortunately, I suggested last time that you might pass the pointer to a window data block here. I've no idea where I picked that one up from, but let me be the first to say that it doesn't work particularly well. There's an example of how it should be done on the cover disc – in the form of a standard *Info* box.

Now that's out of the way, I can introduce you to the latest stage of the project – in an attempt to prevent the proceedings from becoming too abstract, I've started work on a simple database-type program. You may or may not find it useful; it's a utility to record the details of any parachute jumps you've made recently.

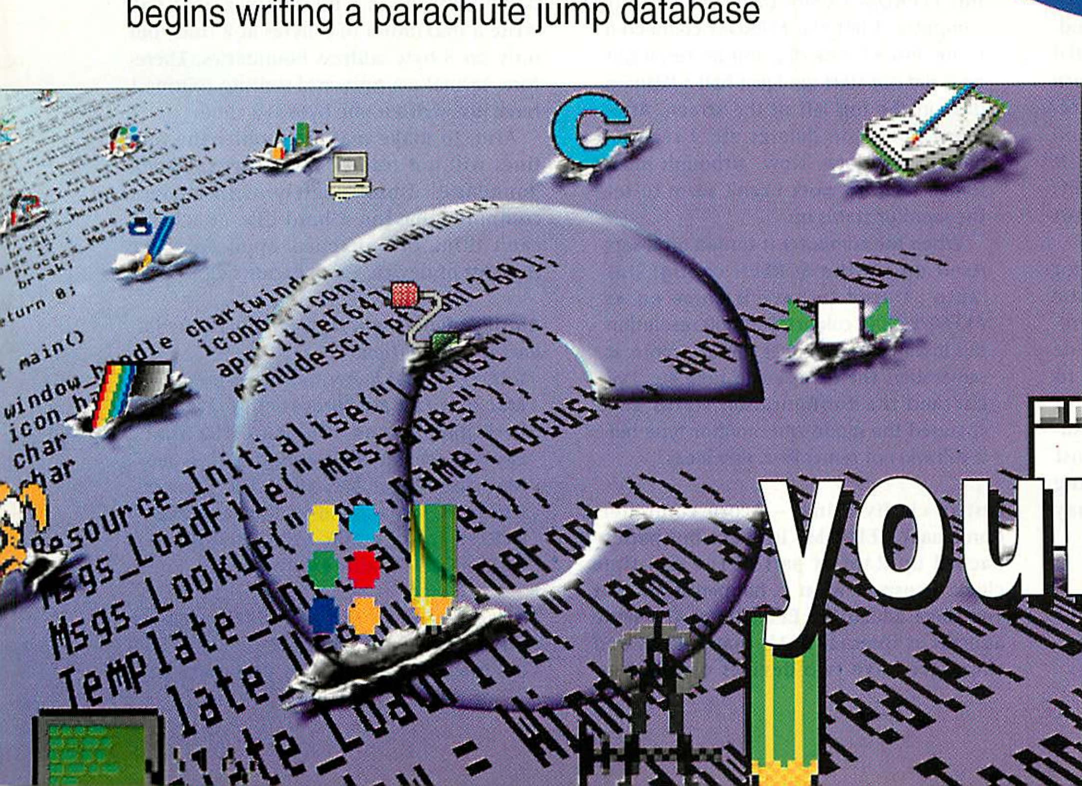
Putting its subject matter aside for a moment (and once you've written the scaffold of the code, it's easy enough to change the field names), a program such as this covers a wide range of aspects. To be fair, it steers clear of the more complicated techniques required for customised output – for instance, the graphics window of *Draw* or the text window of *Edit*. I hope to cover those in the near future, but meanwhile this program will allow us to investigate a wide range of topics from linked list data structures to the message-passing that goes on during a save or load operation.

The first thing to think about when constructing an application of this type is the number and specification of the data fields you will require – from there, you can go on to determine the method of data storage best suited to the task. In this case, most of the fields are strings, such as the name of the drop zone or the aircraft type, and a few are integers – the altitude of the jump and the number of seconds spent in freefall.

To aim for memory efficiency and flexibility, I've decided to create a form of linked list to hold the information, but I'll be using structures that hold a 'last element' pointer as well as one that holds the address of the next element. The reason for this is that the user will want to be able to flick back and forth through the database. A one-way linked list would make this prohibitively hard, so including a 'backwards' link is a simple way of making this easier to deal with. It's possible to create even wilder data topographies, but this should suit us for now.

The next step is to begin defining the shape of the user interface, as this will be critical in the code to come. Using any template editor that comes to hand, it's just a matter of arranging the icons clearly, making sure they're long enough to contain the most extreme of entries.

Once you know the icon numbers of the writable icons in the window, as well as any display icons or buttons there might be, you're ready to write them into the program. I've taken the functions provided by *AULib* and used them to begin building the shell of the database – there's not much to see yet, but I'll present you with the second instalment next month. AU



JACK KREINDLER

Rambles through Acorn

Mike Cook provides solutions to your problems

I mentioned last month my disappointment about the lack of speed from my quad-speed CD drive I bought from Yellowstone. Well, on further investigation I found out that it was only working at the single speed of 150K per second, instead of the supposed 600K per second. I went into the CDFS and typed CDspeed where it told me that the current speed setting was four. However, after the computer actually accessed the drive I found the speed was reported to be one.

Subsequent attempts to set the speed only allowed me to set it to a speed of two, which immediately reverted to one when the disc was accessed. A call to Yellowstone revealed that it knew nothing about this and promised to investigate. It claims it can only get this to happen intermittently and is a bit puzzled, but is investigating.

If you have bought a CD drive it might be worth checking just to make sure you've got what you have paid for. I suggest setting up a large RAM FS and copying a large file into it whilst timing it with the second hand on your watch. This will be accurate enough to tell if you are getting the sort of trouble I am. Don't expect to get up to the full speed, but you should be close. Although Yellowstone has been friendly to talk to I have never been rung back – I'm the one who has to keep mithering. I'll let you know if something gets sorted out, otherwise the drive is going back.

I was finishing off my specialised podule – that's the one I made from the MIDI board in the Christmas 95 issue of *Acorn User*. I needed to have the MIDI connectors, 20-pin User port, IIC socket, +5V and +12 volts all available from the panel. It was quite a squeeze especially as these bits were added over the months and not planned.

When I came to fit the 12 volt socket for this month's project, it fouled the plastic on the case and would not fit in. Therefore, I boldly, or rashly, set about the side of the case with a large round file to enlarge the opening. My wife walked in and asked if that was the sort of file I usually used with a computer? I can almost see the small print in the manual 'cutting large lumps out of your computer may invalidate the warranty'!

Andrew Sanderson from Leeds writes:

Recently you have produced some articles for the Risc PC using its internal IIC bus system. I, too, am interested in using this bus to read and write to serial EEPROMS – the kind found inside an Archimedes/Risc PC and modern TV sets and VCRs. I am very interested in finding out what goes on as I am a Television Engineer, so see these ICs (and the IIC bus) quite a lot, as it is used to store analogue data such as volume and brightness etc.

It has to be said I'm no ace programmer, but looking through some past issues of *Acorn Computing* I came across the 'On the Buses' series you did. I read through it and thought I could modify one of the programs – one that was used for reading data from an A/D converter. Substituting the hex address for the A/D converter with that of an EEPROM, I ran the program. Something other than the expected 'NO ACKNOWLEDGE FROM IIC DEVICE' came up on the screen – a number 35.

I'm not sure what this means, but judging by what I read in the data sheets for the 24C04A device, I think all I did was read one byte where the address pointer happened to be. As I had not written to the EEPROM to start with, so as to reset the address pointer, all I succeeded in doing was to read the same byte. I may have bitten off more than I can chew but I would like to know more about my computer's IIC bus and how to control it.

One last thing, and it may be a word of warning, but while experimenting with this EEPROM I seem to have upset my computer. I left the EEPROM connected to my Risc PC one day and on turning it on it did not start up. I just had a flashing dash in the top left of the screen. After many power on deletes etc. I realised what I had done. Now, although most things seem to work I can't seem to set the monitor status up.

When the computer is turned on it sets itself up (in the SCREEN config.) as 'auto'. I used to have it come on as AKF60/32000, colours/800*600 resolution but it will not remember this any more. It remembers the texture and time etc. I've checked the configuration status and changed the mode and monitor type but it still will not remember. Any ideas?

Just to clarify things – Acorn computers don't have EEPROMS in them but battery backed up RAM as part of the real time clock. I suspect what is happening is that you have added the EEPROM at the same address as internal RAM, that is &A0, and therefore have two devices on the bus, both trying to respond. That would explain why you couldn't start the computer with your chip attached. It would also explain your difficulty in setting the monitor type as bits 2 - 6 of CMOS RAM address 133 hold the monitor type. If these bits are all set that defines 'auto', use OS_Byte 161 to confirm this. It could be that you have damaged a part of the CMOS memory by having another device responding at the same time.

I have wired up a 24C04 EEPROM memory chip to my computer at address &A8 and have produced some routines to show you how to read and write to it. This holds 512 bytes of memory in two 256 byte banks. Writing is a bit complex as it will write a maximum of 8 bytes at a time, but only on 8 byte address boundaries. Therefore, to make a universal writing routine I have just written one byte at a time.

Also, to make matters simpler the routines will not read or write over the bank boundaries. Unfortunately, with modern computers having a hard disc attached I can't think of a practical application for this sort of device. Can anyone help?

Alasdair Bailey sent an e-mail with the following information:

Just to let you know that your program *Mac Icon* can also process the resource fork part of the 'Desktop' file that appears on Mac discs using the freeware Mac disc reader *Mac HFS*. The same is true of PC formatted discs that have been written to on a Mac using the Macintosh's PC disc reader extension.

This thought from Peter Bertinat also arrived through the network:

It's the old story. You set your software

Questions & Answers

Wood

dialling your access provider, and a chewed up version of your wife's voice comes wafting out of the modem loudspeaker. You didn't realise she was on the phone downstairs – and she isn't very pleased about being interrupted by modem whistles.

What we all need is a small device bearing an LED, which lights up when the telephone line is in use. Please could you consider it?

Sorry, but any device that attaches to the telephone line needs type approval, which takes an age and costs a fortune. Even after that, you won't be able to make it yourself – only buy one from the approved company. In this respect it's as if privatisation never happened, but it is faster and cheaper than it used to be.

Why not try a different approach. How about writing a small program that will command your modem to 'lift' the receiver, so you can hear if the other phone is being used. If it is being used it could quickly be 'dropped', if not it could then launch your comms package.

Again through the Net, Nigel Parker wrote:

Around September this year I hope to be unplugging the old 610 and ROMs and sticking in some new ROMs and a blisteringly fast SA-110 card. What am I to do with that sliding front panel which says Risc PC 600? Will the upgrade pack include a new transfer?

I would quite like something which uses the ARM logo – ARM Powered. Didn't I see someone suggesting (perhaps jokingly) that a LED array could be made to show appropriate displays (programmable of course)? May not be too far-fetched. Or how about the PC LCD displays for 200 MHz? Must be plenty of these going spare from obsolete PCs (or do they only go up to 100)?

Nice thought but is it not a little flash and un-British to boast about what you have. Still, you could fit an LCD display under the floppy drive but you would need an interface to drive it, maybe the IIC bus would do best as this is internal. The LCD could be a problem, not in getting one but in terms of cost – a 16 character by 2 line display would cost about £30.

The problem with getting old ones from equipment is that many of them are built specifically for one manufacturer, so the specifications concerning how to drive them are not available. Still, what do other readers think – would it be worth doing?

Speaking of IIC devices Dan Ellis asked me:

Could you please tell me where I can get a list of ICs that will work on the IIC bus. I have looked at the Phillips Web pages but they are all mixed in with all its other chips (of which there are many). Do you have a list of IIC devices?

There is a book from Phillips Components on IIC devices – it is Book 4 part 12 and comes in two volumes. Unfortunately, my supplier has stopped selling this, so it might be out of print. What I have done is compiled a list of all the devices covered in this book and put it on the cover disc as a text file. That way you can look up the device number of what interests you.

Now Alex Pooley has been net surfing and he finds:

I have been using the Internet for a week or two and have come across many sites with movies in Quicktime and .AVI format. I would like to know if there is a suitable player for these formats for Acorn machines.

Finally, I read recently in an Internet magazine about a new graphics format that will hit the Web by storm. They are called Fractal Compressed images and have the PC filetype .fif. According to the article (.net issue l8, page l6), image size compared to Jpeg is 40 times less. Anyway to get to the point, is anyone working on a piece of software to display these images on the Acorn?

You can get several AVI format players – one is PlayAVI from Warm Silence Software (tel: (01585) 487642). In the help file of my 1995 demo it says that QuickTime format is soon to be included.

Onto the fractal compression images. I suspect this is the system proposed by Michael Barnsley in his 1988 book *Fractals Everywhere*. At that time he was making the compression algorithm a commercial secret – maybe he is making it public now.

As far as I know there are no images of this type about. The really difficult part is not decoding them but encoding them – this has to be done by a skilled operator on a trial and error basis. When it does hit the Net I am sure someone will write an Acorn version, but bearing in mind these ideas have been around for about 10 years, don't expect anything to happen soon.

Finally, G Laycock from Humberside gives a possible insight into a recent problem:

I am writing in response to a problem sent in by Mr Morris in the July issue of *Acorn User* regarding a 'Can't open printer' error.

This is similar to a problem experienced at my son's primary school when it bought a new A4000 which had a more recent version of !Printers installed than the one it normally used. Knowing I am an Acorn enthusiast, my son's teacher asked me if I could sort out the problem.

The error only occurred when printing from one particular application, causing the error 'Can't open printer: PDtemp'. On reference to the faithful P.R.M. it stated that device 'printer:' requires no file name after the colon.

What I did was to load the !RunImage file into *Edit* and search for 'PDtemp'. When found it I replaced it with null bytes (pressing both 'Alt_keypad zero', 6 times), and re-saved it – always remembering to make a backup copy of the original before making any alterations. This cured the problem, and as far as I know there have been no more problems with printing since that time.

I don't know if this is the same problem as the one experienced by Mr Morris, but if he has changed his !Printer version it would be worth looking into.

I have not mentioned the application by name because changing the !RunImage file may contravene the copyright and I can't afford any lawsuit.

Thanks for the information and don't worry about any copyright violations – if you legally own the software then you can do what you like in the way of altering it. It's only when you come to try and sell your altered version containing some of the original code that you run into difficulties. Remember that copyright exists to protect the income from a piece of work. If you do nothing to reduce the income of a copyright holder, he has nothing to sue you over. AU

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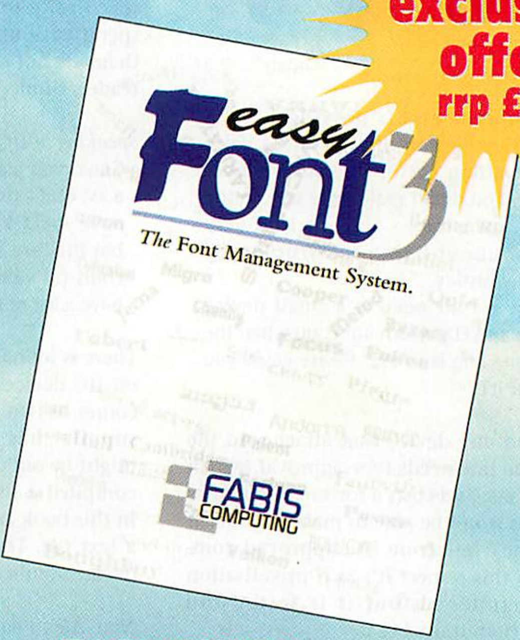
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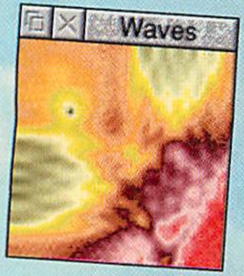
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Letters



StrongEd HTML mode

You mention rumours of an HTML mode for Strong Ed (July AU page 36).

Well, I suggest you have a closer look at your cover CD SHAREWRE. STRONGED/ARC :$.!StrongED.Modes.html

Seriously, the html mode comes as standard with StrongEd version 4 — and will only work with that version. I wrote it in consultation with Gottorm Vik.

It includes a number of different colours for tags, shortcuts for creating standard items such as anchors and headings. It configures StrongEd so that a click on an HTML tag selects the whole tag.

Your review of ZapHTML states that the documentation of that module is a little short. I think that the StrongEd mode shares this criticism, something to be addressed in a later release.

Andrew Black
andrew@bach.demon.co.uk

Excellent customer service

I recently decided to upgrade the hard disc on my Risc PC 600, and purchased a 1.6Gb Conner IDE drive from CJE Micro's, together with the new Filecore (for drives >512Mb) on floppy disc. Last Saturday afternoon, I set about installing it – and experienced problems as the machine refused to boot up with both drives connected (the new drive had not, at that stage, been initialised).

Although I didn't expect to be able to get hold of anyone after 5pm on a Saturday, I phoned CJE, and Ross there spent nearly an hour on the phone from 5.30pm onwards, suggesting various courses of action and waited patiently while I tried them.

Eventually we got the machine to recognise two hard discs, and I was able to transfer all my files to the new drive and remove the old one (perhaps at some stage I'll try to summarise the problems encountered).

I certainly believe that this was service far above what one would normally expect, and I would like to thank CJE and Ross for this excellent support – I wonder how many PC dealers would be prepared (or able) to provide such assistance?

Mike Fowler, Bucks

Graphical grief

I am writing in reply to Phil's letter in the August issue concerning the quality of graphics on Acorn games. He states that inferior consoles such as Sega, Nintendo etc. have much better graphics on their games, despite the Risc PC being a much more powerful computer.

The reason for this is money – plain and simple. A company such as Sega will say 'We are going to make a new game, I expect it to sell x million copies You have a $100,000 budget to develop it with.' The company will then hire a graphical designer(s) who will draw each individual frame of graphics on to the computer — and charge several thousand dollars for it.

On the Acorn platform however, a games developer can't expect to sell anywhere near as many copies and can spend nowhere near as much money developing it. Many will not be able to afford a graphical designer, and will do the graphics by hand instead. Unfortunately programmers are often not the best artists — I speak from personal experience — and so the quality of graphics is sometimes poorer.

This should change somewhat as the Acorn platform gains in popularity, with ART making large commercial deals, and ARM making StrongARM etc...

I am, however, less concerned with the graphics of games as their playability. It has been a long time since I have come across a game that will not get shelved after a few weeks, PC or Acorn.

Ian Caulfield
ic@obsnd.demon.co.uk

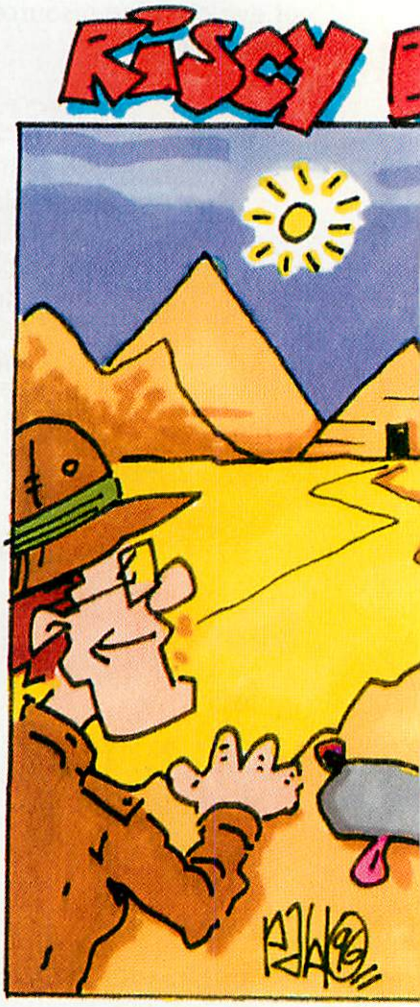
Colton update

In reference to the letter in AU August 1996 from Alex Singleton, could it be made known that there is also a version of *Fireworkz* available for the PC which is both compatible with Win3.1 and Win95. Files from either are fully exchangeable with the other, even including RISC OS and Windows bitmaps.

Also, despite our recent lack of active presence in the Acorn market, we would like to reassure Acorn users that we are actively supporting, maintaining and enhancing our products.

In fact, enhanced versions of both *PipeDream 4* and *Fireworkz* should be released within the next two months, boasting such features as dynamic areas and virtual memory support in addition to a number of extra functions and features.

Finally, we would like to thank Mr Singleton for his public support of our products. We hope that he and all our other



users will continue to enjoy using them.

Niall Douglas
Colton Software programming team

ProArtisan 24 review

Re the article by Walter Briggs in the August 1996 issue of *Acorn User* which deals with *ProArtisan 24*. The article does not make it clear that the author is trying to achieve a particular style using a limited number of tools.

ProArtisan 24 is advertised and sold as a painting package and not as the image processor as Walter suggests. Perhaps we should be flattered though we deliberately only put in a few image processing features – *PA24* is written with a strong emphasis on education.

It has to be said also that *ProArtisan 24* is substantially cheaper, at £99.95 inc VAT, than the other packages mentioned. We do not see *PA24* as competing with these other packages as our program takes a different approach to image creation. Many professional artists that I know use all of the packages mentioned as they each have their strong points.

An artist's traditional toolbox consists of many different tools and materials that are used to build the effects that make up his/her repertoire. *ProArtisan 24* was created with these tools so as to provide similar facilities for the digital artist. In education we talk daily about line, tone, contrast, texture etc. This is the environment for which the program was intended.

A powerful masking feature is available within *ProArtisan 24*, yet no mention was made of its use. As regards the lack of different shaped brushes, the multiple brush has considerable flexibility in its control and effect; from direction, thickness and colour deviance. With the use of the mask (frisket) many subtle effects can be obtained.

The artist first cuts out his frisket to protect those areas he wants untouched, then he works over that area safe from over-spray. In *ProArtisan*, this would progress in a similar way. First use the frisket tools to define the areas you wish to 'cut out' complete with soft edges. Then, return to the canvas with the mask active and use the airbrush as normal. The multiple brush through the frisket would enable soft edge variable strokes to augment those of the airbrush.

As regards the positioning of the *grizzly*, I would have used a separate canvas to generate the image and then cut it to the sprite pool. By using the Adjust button on the canvas while cloning, it is possible to mark the centre origin of the sprite so you can position it exactly where you want it.

I have met many people over the years at shows and within education that use our products in many different ways, some that surprise and delight me, so this rather negative review comes as somewhat of a surprise in a different way.

Jon Warmisham
Co-author Artisan series

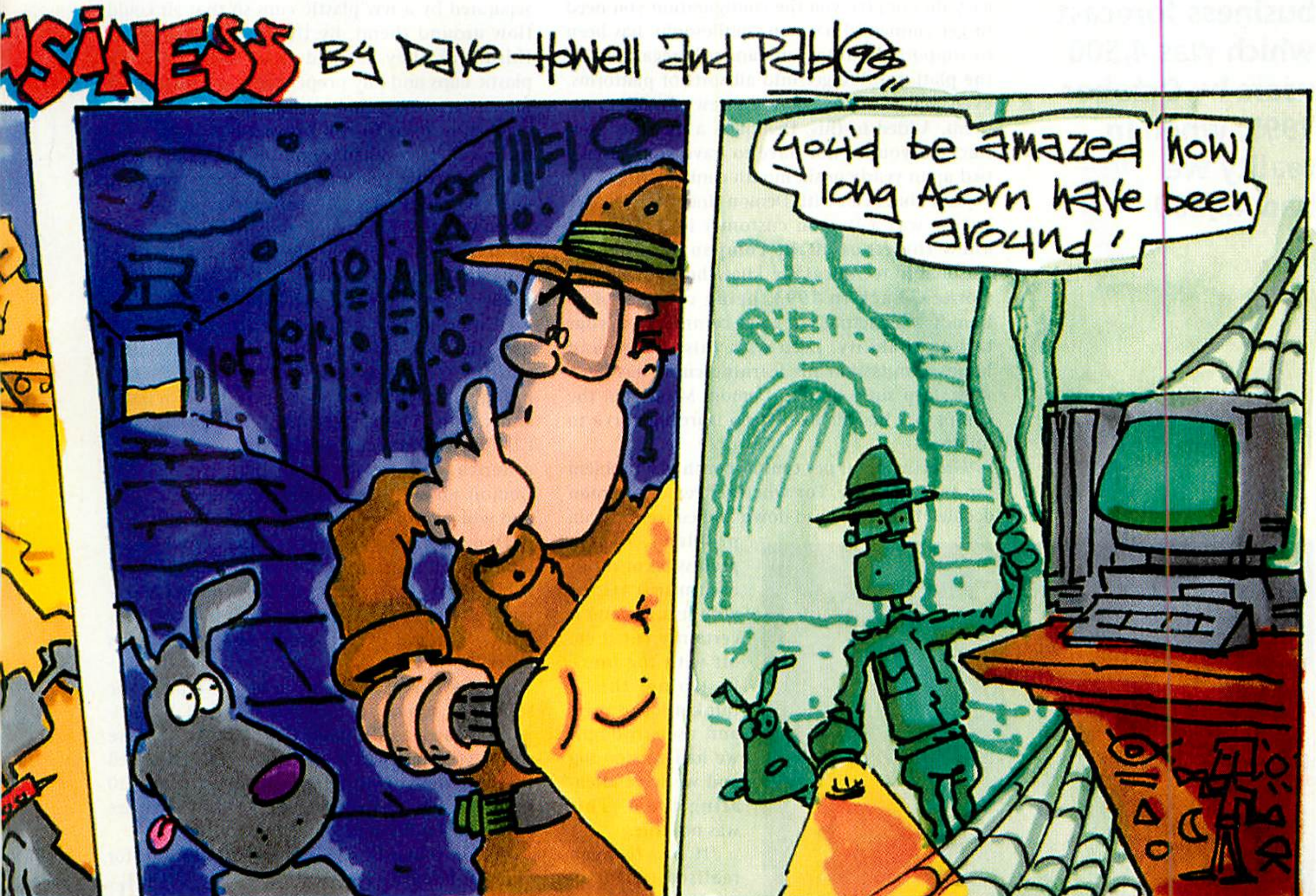
Inky problems

In the March issue of AU, you did a piece on ink refills in the article on Printers.

I have found with experience that a caveat is required, with the Epson Stylus Colour II. The Premier Inks which you highly recommended, as supplied by Kimberley Computer Services, do not contain instructions for this printer, and indeed the KCS staff were unaware that the normal methods of refilling do not work. They do know now, but I have wasted £350 unless a method can be worked out to refill this type of cartridge.

Does anyone know how it's done? Also, is the Premier Ink a suitable substitute for the special inks Epson uses?

James White
Mallorca



The Regal files

I might expect a company with 65,000 'customers' – especially an Internet provider – to have a high-profile but faceless images. Fortunately for Demon Internet it has the charismatic James Gardener as its marketing manager.

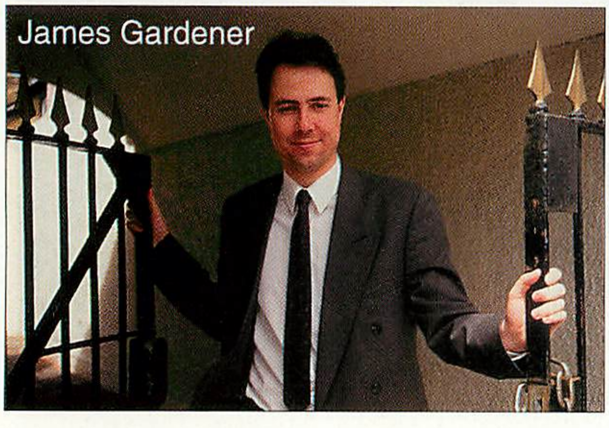
Demon is big and is growing fast. In the last three months, Demon has taken on more new users than EasyNet, one of its closest competitors, has in total. It grows between 10 - 15 per cent a month and, taking up 1 per cent of BT's calls, it is BT's heaviest user.

Demon is the major Internet provider for the Acorn platform. James explains: 'A lot of other providers force you to use their software and they do not give you the configuration you need to get connected. Demon's philosophy has been to support the Internet standards regardless of the platform. We get into all sorts of platforms, even Mac users as there are few providers for them. Added to this, Demon is a monthly contract, so you do not have to have your money tied up in yearly or six month contracts.'

> 'Cliff did the business forecast which was 4,500 users by October 1995, when in reality we had 45,000'

James has been with Demon since March 1995, but he was a Demon customer in 1993 so he knew the ethos of the company and, being reasonably technical, he knew how the system worked. Back in 1993, being connected to Demon was actually a good comment on your technical ability. Even with this background James admits that his learning curve has been very steep since joining Demon. Mind you, the company's had its own steep learning curve to follow.

'Growing at 10 per cent a month is a problem for any company. For whatever reason, Demon decided to put its head down and concentrate on problems. In this process it cut off its communications with its users and it certainly cut them off with the press. In doing this I think a lot of press and users thought we had got too big and we were alienating them. This was not true.


James Gardener

'It has to been realised (unfortunately the hard way) that even if Demon had given the press a message that was not entirely flattering about themselves, it would have been better than none at all because a dialogue is continuing. If there is no dialogue, you have this image of a faceless corporate which is dismissing its users. This was definitely not the case'.

Demon was originally set up (and is still owned) by Cliff Standford. He wanted to play on the Internet so he went to his board and said it is going to cost *this* much money and the board said no way. So he came up with a wonderful scheme to get 400 people to pay £120 a year and they would effectively pay for the service.

'Cliff did the business forecast which was 4,500 users by October 1995, when in reality we had 45,000. The market did not expect it to work, but it just took off.'

Demon was originally conceived as a couple of computers in the corner of a room which would virtually look after themselves. It originally had 16 modems standing in a pile which got a bit lopsided. Then they got a rack of 48 modems, followed by a second rack (the racks were separated by a few plastic cups so that air could flow around them). By the time Demon got a third rack they decided to upgrade from the plastic cups and buy proper racking which had a fan and a power supply costing £1,000 each.

'Demon used to run on one box, which for technical reasons had a limit of 1,000 directories limiting us to 1,000 users on the system. The chap who designed it warned everybody that when we hit 1,000 users the system would break. He was going to Malaysia so he was told to write it down. He did do and stuck it on the wall next to the system. Everyone was happy.

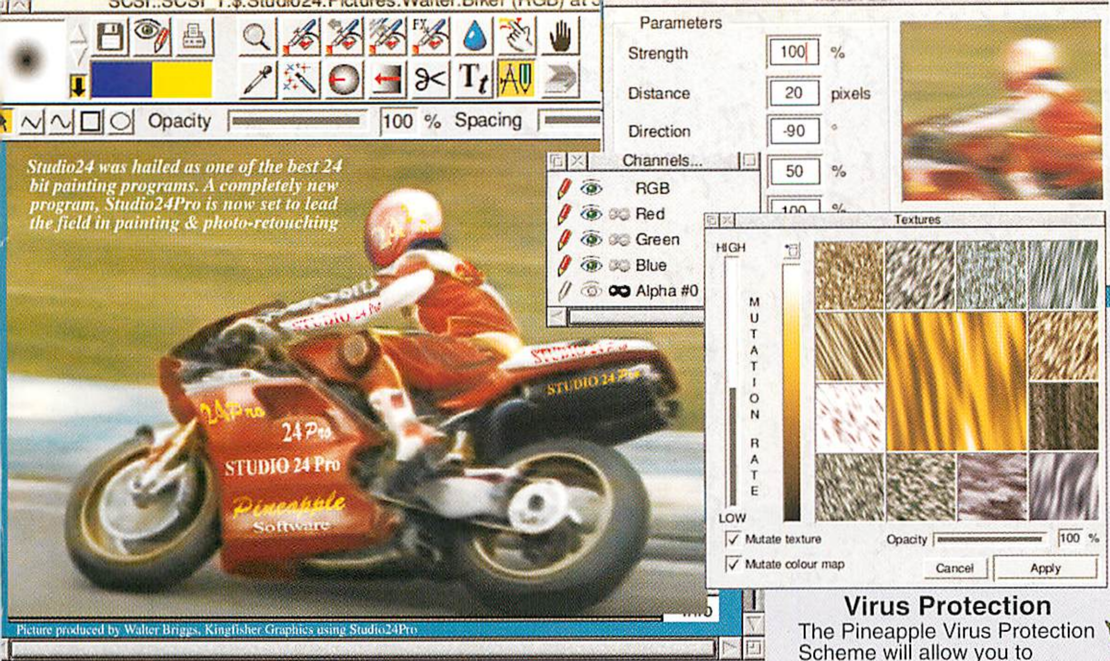
'Unfortunately, by the time Demon hit 1,000 users the wall had long since been pulled down, and the last thing you're worried about when pulling a wall down is keeping the random notes stuck to it. The system did indeed break and Cliff, with impeccable timing, was in South America. This taught us an important lesson: Demon now builds equipment that is scalable and will grow properly.'

Demon's network operations centre is an amazing place, mostly because it shows how things have evolved so quickly from having a wall of BT phone lines to the compact fibre-optics – both of which are in use. Its wiring is beyond belief.

'We have a DS3 which is a big fat pipe to the States and runs at 45 megabits a second. We estimate it can handle about 900,000 users, but we still have a long way to go because it is estimated that Internet growth in the UK will get above 10 million users – based on the fact that there are currently 9 million fax machines.

'And of course there is Europe; the deadline for that was Friday!'

Jill Regan AU



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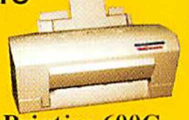
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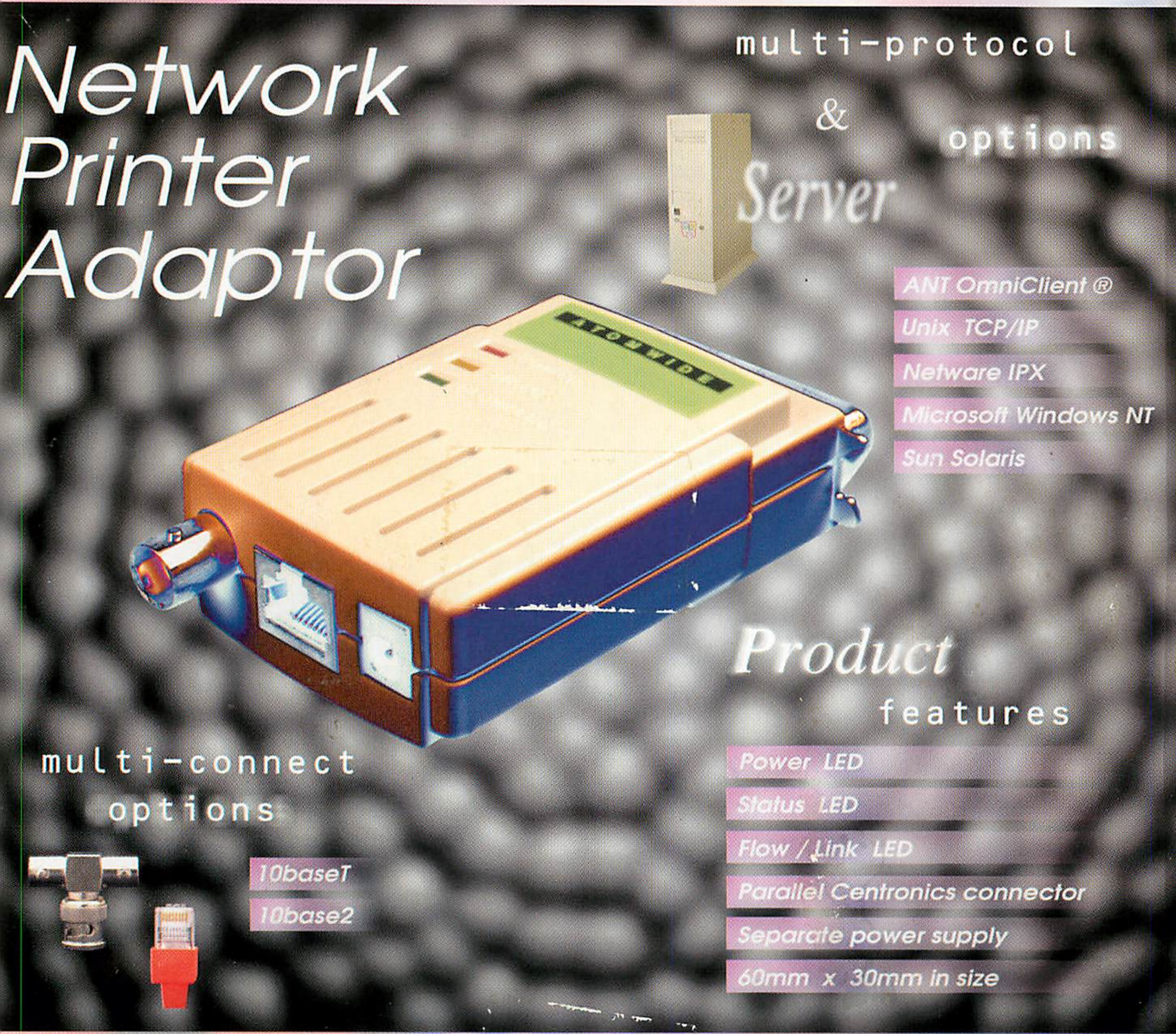
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